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United Arab Emirates University



CONTEMPORARY EMIRATI STUDIES

Written by a Group of Faculty members
at the United Arab Emirates University

Contemporary Emirati Studies

Written by a Group of Faculty members
at the United Arab Emirates University

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Contemporary Emirati Studies

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Introduction

The United Arab Emirates was founded as positive energy, a historical record, and a golden spring of civilization and humanity. The UAE's progress began to face various challenges. Determination and courage seemed to be the only means to conquer and overcome. These challenges no longer represent obstacles to development and progress. The UAE is a well-established renaissance, keeping pace with modern requirements and horizons in all aspects of life, innovation, and growth. Therefore, the newly established state had a strong start, development aspirations, and limitless requirements.

The late Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace, through the circumstances of his youth, full of challenges, and the experience of life in all its fields and difficulties, thankfully became a founder, an inspiring leader, and a statesman. God Almighty granted him wisdom and insightful visions that established the state's pillars making it a model of a pioneering experience in our modern world. Today, the UAE edifices are growing under the leadership of His Highness Sheikh Mohammed bin Zayed Al Nahyan, the UAE President, may God protect him, and his brothers, Their Highnesses the Rulers of the Emirates.

The United Arab Emirates University, which always promotes the development, modernization, and renewal of all its academic programs and courses in various purely cognitive, cultural, and scientific disciplines, presents this book, which, with its title, chapters, and topics, constitutes an academic course. It keeps pace with the UAE's victorious progress with its immortal achievements, strategic dimensions, and future visions.

Based on the pioneering thought of our leadership, and its firm belief that students are the pioneers of sustainable renaissance, and the makers of its glory, the UAE University is pleased to present the topics of this book as scientific approaches that enrich the students' intellectual structure. In addition, the approaches strengthen the students' loyalty and faithfulness to their homeland, the Emirates, and its exceptional leadership.

Chapter 1

Federal State and National Identity

Dr. Ali Ahmed Alghfeli

Introduction

Established in 1971, the United Arab Emirates is a young country. However, the UAE is classified among the most developed countries and possesses a record of laudable impact in various fields of accomplishment. After more than five decades since its establishment, this young, advanced, and influential country continues to develop vigorously in the thriving journey established by the late Sheikh Zayed bin Sultan Al Nahyan. The UAE citizens and residents enjoy all means of stability, and the UAE leadership looks forward to fostering a confident future and achieving the highest levels of prosperity.

The UAE leadership and people believe the UAE is their core objective. The UAE political authorities exercise their governmental roles, legislate and enforce laws, and make and implement policies. As a result, the political leadership aims to fulfil its vital obligations to the security and prosperity of the UAE people and realize stability and development. Since the establishment of the UAE, the Emirati people are certain that the UAE is a source of their good life and believe that their country has made a decisive difference in determining their national aspirations. Therefore, they are proud of the UAE as Emirati citizens and contribute to its development and benefit from the outcomes of the resulting prosperity.

Several millions of people have decided to move to and live in the UAE, motivated by the pursuit of a decent life and attracted by the abundant job opportunities created by the thriving economy. The UAE residents find their career objectives and achieve their professional goals in the UAE, and they highly appreciate the respectable treatment they receive and the rewarding life they lead in the country. They are grateful and eager to contribute to the UAE's success. In addition, millions of tourists visit the UAE every year, from all over the world. They enjoy innovative tourism facilities, supported by modern management methods and advanced infrastructure. The UAE has become an object of global admiration; people aspire to it and prefer to come and live in it, thus becoming a continuous success story, and its development and excellence are witnessed by citizens, residents, and visitors alike.

The UAE has a remarkable presence as a well-established nation state, that has set defined aspirations and succeeded in accumulating achievements. The UAE's notable successes in various vital fields embody the optimal goals that both the political leadership and people seek to achieve. The United Arab Emirates has evolved into a successful example for establishing a modern state. It is widely believed that the emergence and development of the Emirati model is not a coincidence, but rather the result of the political, social, and cultural structural factors

that have contributed to creating a unique synthesis. In essence, belonging to the homeland, good governance, and loyalty to the leadership made stability and prosperity a substantial reality in the UAE.

The UAE has received the attention of scholars, and its distinctive performance at the local, regional, and international levels has become the subject of research questions concerning the factors that have contributed to entrenching its national institutional structures. Such questions aim to explain the foundations of comprehensive development and study the culture and practices of peace, cohesion, and prosperity. Interest in studying the structural aspects of the UAE is based on many factors, including the importance of the modern nation state for the UAE people, the distinctive institutional structure of the federal state, the uniqueness of the essential components of national identity, and the traits of Emirati personality.

Therefore, a robust study of the UAE must explain the nature of its contemporary achievements through its establishment as a nation state on December 2, 1971. Understanding the various dimensions of domestic politics in the UAE require focusing on the empirical realities and philosophical connotations determined by the federal structure of the state. This study should also address the substantive and normative foundations that create the Emirati national identity, which is firmly instilled in the conscience of the Emirati people. Further, the study should seek to define the features of the Emirati personality embodied by the Emirati individual and reflected in the country's international reputation.

This chapter deals with the political aspects of the United Arab Emirates, by clarifying the importance of the nation state as a major and inspiring fact in human life and explaining the structural aspects of the federal state as a form of national institutional arrangements. This chapter also considers people within the framework of the state. Therefore, it discusses the subject of national identity as the emotional, value-based, and behavioural expression of individuals' affiliation to the nation state and analyses the Emirati personality that gives both the state and citizens unique characteristics in relation other countries and peoples. Explaining the establishment of the UAE as a modern state, the federal structure of the UAE, the components of the Emirati national identity, and the features of the Emirati personality define the vital role of the founding father, Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace. He formulated the intellectual foundations in establishing the UAE and the federal state. Sheikh Zayed had placed the UAE on a persistent journey of development, which the country has continued to achieve from the moment of its establishment until the present time.

National State

The state is the primary subject of study in the field of political science, through both philosophical theorization and scientific research. Political thinkers study the arguments that attempt to justify the existence of the state and determine the optimal form of political authority, and specialists in comparative politics endeavour to understand patterns of governmental structures and the performance of political institutions in the state. Additionally, scholars of international relations try to understand the determinants of the external behaviour of countries and examine the variables affecting conflict and peace. Public policy scholars seek to know the alternatives available to governmental institutions for meeting the diverse needs and demands of the various segments of society.

The state is an important legal and political entity in our contemporary world. Typically, the definition of the state depends on identifying its foundational elements that include territory, people, and governmental authority. The three elements must exist jointly to consider the political entity a state in the proper sense of the term. The concept of the nation state includes an important assumption, the essence of which is that people with common national and cultural characteristics that unite individuals have the right to self-determination. Therefore, people who identify with such shared ties should be able to establish their own nation state on a designated territory, and this people should be subject to the authority exercised by the government of the state.⁽¹⁾

The nation state is endowed with a unique characteristic that is not available to any other human entity, which is sovereignty. Sovereignty refers to the government's exclusive and ultimate authority over the state's territory in making decisions and drawing up binding policies in the name of the state.⁽²⁾ The nation state protects its sovereignty by all possible means against any sources of internal and external threats. Violation of and threats to the sovereignty of the state are sources of the security problems and conflicts that erupt in different regions of the world.

The nation state is also one of the most important components of the international system in our contemporary world. The state needs to obtain recognition from other countries to be able to conduct normal relations at the international level. People of the world live as citizens in the political communities of their respective countries, and therefore the nation state constitutes a substantial reality in human life. The establishment of the state provides the opportunity to realize people's aspirations for civilized life, essentially because the state structures, institutions, and policies create actual liveable conditions. Although countries of the world are equal from

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a legal standpoint in terms of being independent and sovereign nation states, they nonetheless vary in terms of their ability to exercise actual sovereignty, based on their relevant political capabilities, human potential, and efficiency of governmental institutions.

In addition to studying the state, political science also studies power relations within the state and between states. The nation state is supposed to be able to monopolize the legitimate use of force within its territory, so that only the government of the state has the legitimate capacity to use force, and this is an important requirement in the concept of the state.⁽³⁾ Sources of state power differ from one country to another and governments, therefore, exercise various levels of influence. Power affects the extent of the state's ability to achieve its national interests. From a realistic perspective, the primary national interest for any country in a world of conflicting wills and interests is to secure its survival. Therefore, the primary goal for any state is to have the national power necessary to protect its existence as an independent, sovereign state.

From a philosophical standpoint, the individual lives in the state under the social contract that establishes the political community, the state, and the government. Accordingly, the individual is a citizen and a member of the political community.⁽⁴⁾ All citizens in the political community have a solid and unique bond that makes them a single political entity. The essence of this bond is their collective submission to the national sovereignty of the state and acceptance of the government's legitimate authority. For its part, the government is committed, under the social contract, to providing protection for citizens in the political community and pursuing the general will of the people towards achieving the public good.

From a realistic perspective, the state is of great importance to people . It represents the real context in which people acquire their living requirements and realize their aspirations. The state functions as the secure protection of the homeland. It is also the arena in which development activities are carried out in all fields, such as economy, education, and health, for the benefit of the various segments of society, including individuals, families, and business firms.

It is difficult to imagine human life in the absence of the state. The state has become an inherent reality for people, to the point that no one can contemplate, even hypothetically, the acceptable alternative in the absence of the concept and reality of the state. The extent of damage to human life that could result when the state's sovereignty or authority is violated, or its performance is disrupted for any reason, can be incalculable.

Federal State

In 1967, the rulers of the Emirates established the Council of Rulers of the Trucial States, to coordinate the development of the infrastructures and promote the economic activities that people needed at that time. In 1968, Britain announced its intention to withdraw from its protectorates in the region by the end of 1971. The late Sheikh Zayed bin Sultan Al Nahyan and Sheikh Rashid bin Saeed Al Maktoum took the initiative on February 18, 1968, to meet in the village of Al Sameeh in the Emirate of Abu Dhabi, close to its borders with the Emirate of Dubai. They discussed the idea of a union between the two emirates, while the rest of the emirates, in addition to Qatar and Bahrain, would later be invited to join the new union. However, Qatar and Bahrain preferred not to join the union, and announced their establishment as independent states, each of which has national sovereignty over its geographic territory.

The efforts of the ruler of Abu Dhabi, Sheikh Zayed bin Sultan Al Nahyan, and the ruler of Dubai, Sheikh Rashid bin Saeed Al Maktoum, culminated in the approval of the draft Constitution of the union on December 1, 1971. The next day, the rulers of the rest of the emirates attended the meeting held at Al Diyafah Palace in Dubai, during which the ruler of the Emirate of Sharjah, the ruler of the Emirate of Ajman, the ruler of the Emirate of Umm Al Quwain, and the ruler of the Emirate of Fujairah joined the union. The completion of the Federation between the seven emirates did not take long, as the Emirate of Ras Al Khaimah joined on February 10, 1972. By declaring its establishment as an independent, sovereign state, the United Arab Emirates was recognized by countries around the world, and the new state quickly gained membership in the League of Arab States and the United Nations. The UAE began its formal relations, exchanging diplomatic missions with various countries of the world and strengthening its relations with other countries at the regional, international, and global levels.

The constitution is the most important document in the nation state. It is the supreme source of general principles and basic laws governing the vital aspects of the state. It defines the state's primary priorities and objectives, describes the governmental structures, and expounds the existing social systems. The constitution also establishes the foundations regulating the relationship between governmental authority and the people. Further, it prescribes the relationship among individuals, specifies their rights and duties, and clarifies important aspects of the political, economic, and cultural activities. In addition, the constitution manages the differences and disputes that may arise between various governmental authorities and institutions.⁽⁵⁾

The UAE Constitution contains 152 Articles in 10 Chapters. They deal with the general principles and fundamental aspects that describe the distinctive characteristics of the UAE in terms of the structure of the state and governmental institutions. The Constitution specifies the federal structure of the UAE as a nation state.⁽⁶⁾ In this regard, essentially, the UAE Constitution provides the legal basis for the existence of the federal institutions and practices in the country.

The federal system, or federalism, can be defined as a structural arrangement of the nation state, which aims to establish an institutional relationship between the local political units that make up the federation, such as states or emirates. Accordingly, two levels of government are established, federal and local, so that the division of sovereignty in the state is between the federal authority and the authorities in the local units that are members of the federation. The legislative and executive powers of the state are distributed between these two levels of government.⁽⁷⁾ In this context, the United Arab Emirates represents an existing empirical application of the federal system in accordance with the conventional meaning of this concept⁽⁸⁾.

In Chapter 4 of the Constitution of the UAE, the five federal authorities are identified: The Federal Supreme Council, the President and his deputies, the Cabinet, the Federal National Council, and the Federal Judiciary. The Constitution describes the five authorities and the related assigned powers. Chapter 5 of the Constitution addresses the considerations regulating the issuance of federal decrees and the laws and institutional procedures. Chapter 6 states an important fact regarding the federal structure in the country, indicating that the local governments in the seven emirates have the authority to exercise powers that the constitution does not entrust to the federation. This chapter states that these emirates participate in the federation and have the right to benefit from their presence as members in the federation and to benefit from the protection and services provided by federal state.

According to Chapter 7 of the Constitution, sovereign powers are vested in the federal and local governments in the UAE. The Constitution specifies the legislative and executive powers exclusive to the federal authority, such as foreign affairs, defence, security, monetary subjects, and many other aspects of life in the state. The UAE Constitution also specifies the exclusive federal authority's legislative powers including, for example, labour relations, social security, banks, and agricultural and livestock wealth protection. The UAE Constitution grants the local governments all other powers that are not provided solely for the federal authority.

The theoretical and strategic implications of the federal state:

In light of the theoretical background of the concept of the nation state, from both

philosophical and practical standpoints, as reviewed in the previous section of this chapter, the establishment of the UAE on December 2, 1971 is an embodiment of rewarding accomplishments. The establishment of the UAE embodies a fundamental achievement, specifically the creation of the Emirati social contract, which is both a significant intellectual accomplishment that marked the establishment of the nation state and the basis of the comprehensive development that the UAE has made. The Emirati social contract transforms every Emirati individual into an Emirati citizen. This is a vital advantage, by which individuals have moved from the limited scope of membership in one Emirate to become Emirati citizens living in the broader space of life provided by the federal state. In addition, the Emirati social contract has produced a harmonious political community in the Emirates. This is also a fundamental advantageous accomplishment, which defines the connection of every Emirati citizen with all other citizens, in a strong and noble relationship, which is citizenship. Citizenship is a legal, intellectual, and moral relationship that unites the Emiratis within a collective entity that includes the entire people of the UAE.

Philosophically, through their membership in the UAE political community the Emirati citizens contribute to the formation of the federal state. Practically, the UAE citizens also participate in the performance of the federal state through submitting to the General Will. Overall, the UAE federal state prioritizes the Emirati individual and the institutions of the federal government seek to achieve the common good.

This relationship between the Emirati citizen and the federal state is accompanied by another essential consideration, implying that the individual will of the Emirati has given way to the general will composed of the wills of all citizens. In light of the citizen's membership in the political community of the UAE, there is no place for narrow pursuits of self-interest. Rather, membership in the political community implies that every citizen is expected to seek the public interest that the federal institutions aim to realize in accordance with the constitutional foundations.

The Emirati citizen's membership in the political community and acquisition of citizenship in the federal state constitutes a transition from the narrow individual will to the general will. Therefore, the Emiratis have strong reasons to restrict selfish interests and exercise, instead, self-restraint by placing personal interests within the collective context of citizens and respecting the interests of others. The Emirati discovers the great benefit of cooperating with others to achieve common interests approved by the political community within the general context

of the nation state. The UAE citizens enjoy the security and material benefits achieved by the federal state and realize that they are reaping the fruits of interdependence and cooperation inherent in the political community and the general will, through the performance of the governmental institutions established by the UAE Constitution.

The UAE federal structure has important strategic implications for the performance of the UAE on the local, regional, and international levels. Below we discuss three aspects, namely rationality, interdependence, and certainty.

Rationality:

Rationality is one of the most important characteristics of human beings, and this fundamental capacity is based on the ability to observe and analyse the surrounding situations and recognize existing challenges and potential opportunities. The UAE has been able to determine the goals that best capture its national interests and choose the viable alternatives to achieve these interests effectively. It is evident that the establishment of the United Arab Emirates in 1971 was an abundantly rational decision, taken by the founding fathers to achieve the crucial interest for the Emirati people, which is the establishment of their own nation state, to facilitate realizing the objectives of development for the Emiratis in all aspects of life, and to respond to the regional and international security imperatives.

In addition, the federal structure of the new nation state is a significantly rational decision. Essentially, the founding fathers achieved integration among the seven emirates through constitutional arrangements, by which the federal government and the local governments collaboratively shared the political powers and processes of sovereignty. This rational approach has helped to address the societal interests of the UAE citizens and residents. Therefore, the federal structure of the United Arab Emirates is a strategic rational approach, largely because it represents the choice of the most efficient alternative among other possible alternatives for organizing the relations among the seven emirates. The significant cumulative developmental achievements the UAE has been making since its establishment over five decades ago validate the rationality of the federal system.

Interdependence:

The decision to establish the United Arab Emirates as a nation state and adopt the federal structure was a response to the requirements of interdependence among the seven emirates. The fact is that many social, cultural, economic, and political ties connected the emirates before the establishment of the union, and people interacted deeply and interdependently for

centuries. The federal structure of the UAE has evolved into a sustained arena for achieving more rewarding interdependent interactions between the seven emirates. From a strategic perspective, the federation commenced with the established historical ties between the Emiratis, and after the establishment of the nation state the federation became a means for diversifying, expanding, and strengthening ties among the Emirati people.

The federation creates broader political spaces and provides greater possibilities for the Emirati people and expands the institutional scopes in areas important for shaping the lives of the citizens and residents. The increased levels of interdependence implied by the UAE federation provide the theoretical framework and practical context that sustain federal structures and guide the performance of the federal government. Accordingly, the UAE adopts national strategies and implements federal policies that seek to promote the prosperity and stability of all segments of the society at the national level.

Certainty:

The UAE federal state embodies the vital principles of rationality and interdependence. It also meets the requirements of certainty necessary to overcome future national challenges. Despite the importance of the state for nurturing modern society, world events do not follow a clear path, and it is difficult to predict the sharp turns or dangerous crises that countries may witness in the global arena. Economic difficulties can worsen, political conflicts intensify, technical revolutions come about, and disasters and epidemics occur unexpectedly. These events create worrying shocks and raise levels of uncertainty for governmental institutions, international organizations, and companies. When methods of coordination and cooperation are disrupted among countries and societies that have mutually dependent relationships, governments may fail to efficiently achieve common interests, and increased ambiguity and uncertainty may thwart the advantages of rationality and interdependence.

From a strategic standpoint, the UAE federation facilitates the prosperous life throughout the country, and it combines the capabilities available in the seven emirates with the capabilities of the federal government. Effectively, the federation consolidates the UAE national capabilities and augments the collective resources needed to address opportunities and challenges successfully. Therefore, the federation of the UAE contributes to lowering ambiguity and increasing certainty for a secure and stable future.

The federal structure is of central importance to the United Arab Emirates. It has deep theoretical underpinnings that explain the existing federal institutional arrangements and

provide philosophical implications that justify indispensable patterns of political life in modern society. The federation creates the strategic contexts for the significant development and progress in the UAE. Because of the worthy moral virtues and tangible material benefits associated with the federal structure, Emiratis are proud of their nation state and value its federal structure. The national conscience of the Emirati people upholds the federation, and their loyalty to the federation is integral to the Emirati national identity.

National Identity

The nation state is based on an important philosophical justification. In essence, people with common national and cultural characteristics that unite and distinguish them from other nations have the right to determine their fate, establish their nation state, and live under the authority of their government. This intellectual justification links the people and the state, as there is a strong relationship between the distinctive characteristics of the people, on one hand, and the need to establish the nation state, on the other. Therefore, it is not possible to define the people outside the framework of the nation state, or the nation state in isolation from the distinctive characteristics of the people.

We have addressed the federation as a fundamental structural characteristic that distinguishes the United Arab Emirates, and now we turn to addressing national identity as a qualitative entity that brings together the Emirati people and links the people of the Emirates to their nation state. Therefore, this section of the chapter discusses the concept of national identity, emphasizes its importance for the lives of the people, and derives the moral and practical implications of the Emirati national identity.

The concept of national identity in the context of the state indicates the existence of a set of common characteristics among the people, who have similar existential and cultural characteristics that unite and distinguish them from other people. These collective characteristics connect people emotionally and impart mutual values and behaviours.⁽⁹⁾ From this standpoint, national identity creates an entity of unified people in the nation state. The people, in turn, derive factors of mutual harmony from the components that constitute their national identity.

The binding ties of national identity turn individuals into a collective entity that exceeds in nature and significance the numerical aggregate of the population. National identity imparts a great deal of emotional empathy and structural cohesion among citizens, and infuses the UAE people with unique characteristics, thus uniting members of the UAE political community as a strong component of the nation state. National identity helps integrate the Emirati individuals

into the UAE people. It is like the integration of the individual into larger entities, such as the integration of the individual into both the political community and the nation state.

The concept of national identity is also associated with the concept of the nation state and the concept of federation through the common purposes that combine these three concepts. They involve acknowledging the empirical facts about the common characteristics among a group of people and ensuring that individuals can transform such bonds of common characteristics into mutual existence and sustainable reality. The concept of the federation, in essence, recognizes the common characteristics of the citizens of the seven emirates, allows them to associate with each other, and integrates people into a single institutional association in the nation state within the federal structure. Therefore, these three concepts mutually seek to achieve a major common goal, which is to enable the people to live in security, stability, and prosperity, by ensuring solid structural arrangements for individuals, families, society, the emirate, and the nation state. The federal nation state aims to increase the sources of national power, which contributes to increasing the effectiveness of the state's performance in the social, cultural, political, economic, and security aspects.

The United Arab Emirates is distinguished by its own national identity, which is the Emirati national identity, consisting of seven essential components that the Emiratis believe create the connection that unites them. Aspects of each component are briefly explained below.

1. Geography:

Emiratis grow up throughout the UAE and carry out diverse human activities on its soil during the various stages of their lives. Throughout the country, the Emirati people achieve the milestones of comprehensive development. The land of the Emirates constitutes the place where the entire life of the Emiratis happens, and their collective memory is linked to the geographical details and environmental features in which they live. The natural resources available in the Emirati territory enable people to engage in the various economic activities that provide them with the means necessary to sustain respectable living and develop the modern Emirati society. The land of the Emirates constitutes a great share of the psyche of Emiratis. As they strive to serve their nation and secure the future of their country, the Emirati people are willing to make precious sacrifices in defence of the land of the Emirates.

2. History:

The Emiratis relationship with the land that constitutes the territory of the UAE can be traced to ancient historical periods. The history of the region dates back thousands of years

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and relates to the ancient civilizations that existed in the geographic area of the UAE. The archaeological monuments in several parts of the UAE confirm the long history of the Emirati people's connection to the land in which their ancestors lived. Excavations made by archaeologists attest to the diversity of professions and skills that the people of the region had in ancient times. The UAE's present geographical area was not isolated from the world, as many archaeological sites prove that people in this region had interacted with the civilizations that existed throughout various historical stages, thus indicating the historical importance of the region and the interaction of its ancient inhabitants with the world.

3. The Islamic religion:

The UAE is part of the Islamic world, and the Emiratis embrace the Islamic religion, believe in the principles of the Islamic doctrine of monotheism, and follow the norms approved by the teachings of the Islamic religion. The Emiratis adhere to the foundations of morals, conduct, and behaviour that Islam encourages among Muslims and towards others as well. Emiratis realize that the Islamic religion is an essential component of their identity; everyone is a member of a Muslim society and has ties of faith and worship. The society realizes the framework of the nation state and the constitution affirms that Islam is the official religion of the federal state and a source of legislating laws.

4. The Arabic language:

The UAE is located in the Arabian Gulf region and part of the Arab world. The Arabic language shapes the citizen's conscience as an essential element in formulating Emirati privacy and distinguishing Emirati society from many other peoples in the world. The Arabic language represents the UAE cultural life. Emiratis comprehend classical Arabic as well as the local Emirati Arabic dialect into their cultural perceptions and practices. Through the Arabic language, Emiratis express their intellectual and literary activities, and education in the UAE in the Arabic language. The Arabic language is the most important tool of communication for individuals in UAE society. It is the language used in the media and the official language approved in government institutions.

5. Customs and Traditions:

The UAE people have an authentic and rich cultural heritage. The UAE society is proud of the legacies that have accumulated in the consciousness of its successive generations throughout history. In terms of moral principles and manners, Emiratis rely on a long record of customs and traditions that support the values of wisdom in various social contexts and interactions. Emiratis realize that their heritage, customs, and traditions link them together, by formulating

the common features of the Emirati personality, creating commonality in the social and moral principles of the Emirati family, and building solid structures of values, morals and standards of interaction at the community level. These elements of common heritage, customs, and traditions add special features to the Emirati national identity and promote mutual cohesion among the Emirati people.

6. Belonging to the nation and loyalty to the leadership:

The state's national symbols, including the state flag, the national anthem, the official state emblem, and the political leadership, represent the Emirati national identity. Due to their sentimental value and institutional importance for the nation state, the federation, and national identity, UAE citizens highly appreciate the national symbols of their country. The visible presence of these symbols in people's daily lives promotes the existence of national identity in the perception of society. The Emiratis respect the national symbols of the state, thus linking the people with a strong fate of belonging to the homeland and loyalty to the leadership. This component of the Emirati national identity is of great importance, as Emiratis express feelings of firm gratitude for their country and embrace profound appreciation for its leadership.

7. Tolerance and Coexistence:

The UAE does not live in isolation from other countries and civilizations. To the contrary, the UAE is active within many regional, international, and global contexts, and is engaged in vital interactions with various governments and societies worldwide. Emiratis have long understood the importance of communication and collaboration with other peoples, and they remain cognizant of this aspect of modern life. Therefore, tolerance is a distinctive element of the Emirati national identity, as the UAE is open to other people's cultures and norms in the UAE accept their expression within the limits permitted by the law. Obviously, tolerance is supported by coexistence, as the country hosts millions of people coming from about two hundred countries, as residents, visitors, and tourists. Guests in the UAE find welcoming acceptance and appreciation, and they coexist with each other in the Emirati society under the principle of the rule of law.

The moral and practical implications of the Emirati national identity:

The components of the Emirati national identity embody established structures that evolve around the Emirati people and depend on geography, history, religion, language, cultural heritage, political system, and societal values. Therefore, the Emirati identity is both entrenched and sustainable. It extends across the past, present, and future of the UAE. The various components of the Emirati national identity jointly describe the ties that bind Emiratis,

strengthen their awareness of the mutual bond, and transform this awareness into a collective reality that includes the individual, family, society, and institutions.

The components of the Emirati national identity imply that Emirati people have a common existential awareness. National identity creates the substantive cues by which Emiratis know each other, and it determines how Emiratis want others to recognize them. Accordingly, national identity helps others recognize Emirati people, and the compatibility between the self-definition of the characteristics of Emirati national identity and how others recognize these characteristics is a crucial cornerstone of the structure of the nation state.

Nation states keenly preserve their national identity through collaborative efforts among individuals, families, society, and institutions, and the UAE is no exception. The UAE treasures the Emirati national identity and stresses its components, upholds its sentimental bases, and introduces guidelines to encourage proper expression of its behavioural manifestations.

The sentiment of the Emirati national identity is rooted in the hearts of citizens. The Emirati national identity unites the Emirati people and connects citizens to the federal state. National identity is a collective product, jointly created by individuals and society. Accordingly, instilling the Emirati national identity at the individual level requires the support provided by the predominant manifestations of national identity at the societal level. Likewise, securing the dominance of the Emirati national identity at the societal level is determined by the extent to which Emirati individuals collectively adhere to the essential attributes of their national identity. Overall, the Emirati national identity is practiced through commendable behaviour, and sustaining the components of national identity should benefit from collaborative efforts among various segments of the society.

National identity has persisted throughout successive Emirati generations and maintained its essential aspects. It has successfully adapted to the rapid technological, economic, and cultural developments that the world has been witnessing.⁽¹⁰⁾ In this context, the seven components of the Emirati national identity constitute the imperatives that must be considered to effectively deal with the repercussions of the transformations taking place in human society. The prudence of the Emirati individuals, families and society should enable exercising the controls needed to circumvent the adverse implications of social change and protect the national identity from the resulting potential negative effects.

The UAE government seeks to protect and preserve the Emirati national identity, and

the UAE leadership emphasizes adhering to the established essentials of national identity. Governmental institutions implement numerous initiatives, programs, and campaigns to consolidate the Emirati national identity. Based on the values of tolerance and coexistence, the Emiratis realize the importance of maintaining balance in dealing with global cultures and interacting moderately with cultural changes. Emirati people seek to optimize mutual interests with others while maintaining their national identity. The UAE citizens, residents, and institutions in the public and private sectors are responsible for respecting and preserving the Emirati national identity. In this context, they simultaneously achieve national and societal cohesion and promote the values of tolerance and coexistence.

The Emirati Personality

The implications of the concepts of the nation state, the federation, and the Emirati national identity create the structural context that influences the political and social processes and practices in the UAE. These concepts provide the factors that shape the empirical realities in UAE. Accordingly, the alternatives that people and institutions choose in various areas of life are influenced by these factors, thus ensuring that the resulting behaviour is compatible with the intellectual denotations of the nation state, federation, and the Emirati national identity.

From a philosophical standpoint, the three concepts of nation state, federation, and national identity provide important intellectual dimensions of the UAE's fundamental human virtues. The moral values embedded in the three concepts can be identified by the good motives and intentions inherent in them. Obviously, the good motives and purposes behind the establishment of the UAE are closely linked to the founding father, the late, Sheikh Zayed bin Sultan Al Nahyan, whose vision prompted the successful journey of the UAE. He created the UAE as a nation state, decided its federal structure, and supported the Emirati national identity.

Sheikh Zayed made great efforts to establish the state, and therefore had effectively explored the relevant intellectual questions. Theoretically, some of the relevant questions Sheikh Zayed must have contemplated include: What is the ideal form of organizing political life in the United Arab Emirates? How can the union of the seven emirates be achieved into one entity in a way that can justify the existence and sustainability of that entity? What are the national values that the people should have? What is public interest, and what is the best way to achieve it? How should the competences of sovereignty be carried out at the local and federal levels? What are the principles of good governance? How should the rights and duties of individuals be determined? What are the roles that governmental authorities should play in various areas of life? Hypothetically, Sheikh Zayed had attempted to answer these and other fundamental

intellectual questions in the process of establishing the UAE.

Sheikh Zayed's answers to these questions evolved around the concepts of the nation state, the federation, and national identity, and therefore it can be argued that the UAE embodies the practical implications of these answers. The intellectual answers that Sheikh Zayed bin Sultan Al Nahyan and the Founding Fathers had actually implemented contributed to the creation of the Emirati social contract, the nation state, the political community, the federal state, governmental authority, and the national identity, within which the UAE citizens and residents live.

Jointly, the conceptual and empirical connotations of the nation state, the federation, and national identity contribute to creating the Emirati personality that characterizes the UAE in the local, regional, and international contexts. Therefore, the UAE has its unique Emirati personality, characterized by qualities derived from the virtues created by the theoretical and practical implications of the state structures discussed in this chapter, namely the nation state, the federation, and national identity. In addition, Sheikh Zayed bin Sultan Al Nahyan's memorable doctrines emphasize these virtues in the Emirati personality. Therefore, below are some of the most important qualities of the Emirati personality, reflected in the behaviour of Emirati people on one hand, and in the UAE's approaches and policies in the internal and external contexts, on the other.

1. Tradition and Conservatism:

Emirati culture has historical roots, and the Emiratis are proud of their authentic heritage and adhere to their cultural legacies. They observe customs and traditions, value their conservative beliefs, live in modern society, and engage with the advantageous aspects of progress in the contemporary world.

2. Gratitude and Thankfulness:

Emiratis realize the virtue of living in a nation state, and they hold the UAE nation in high regard. The Emirati people greatly appreciate the UAE leadership and the value resources allocated by the federal and local governments towards achieving public good and goals of development.

3. Wisdom and Prudence:

The Emiratis derive from their deep history rich accumulated experiences. Wisdom prevails in the Emirati individual, supported by good insights into facts and realities. The Emiratis uphold national convictions and choose well among alternatives when making decisions.

4. Determination and Collaboration:

Emiratis value knowledge and realize the benefits of applying scientific approaches in modern society. They aim to understand realities, set goals, and value the relentless pursuit of achieving the best possible results. The Emiratis seek cooperation and recognize the importance of cohesion to augment strength towards achieving common goals.

5. Ambition and Perseverance:

As they live in the present, Emiratis are proud of the past and are interested in addressing the potential opportunities and challenges of the future. Emiratis aspire to achieve improved international status and realize optimal levels of performance and productivity. Through the capabilities of the youth population and innovation, they are determined to achieve success in various developmental endeavours.

6. Compassion and Tolerance:

The Emirati people aim to ensure that welfare prevails for everyone. Emiratis respect the rights of their neighbours and are characterized by acts of kindness. They welcome guests and deal with them with compassion and interest. Emiratis value human beings, protect their dignity, and are open to others.

7. Poise and Moderation:

Emiratis act wisely, by investing in the positives and avoiding the negatives, recognizing opportunities, and anticipating threats. The Emiratis bear their social and legal obligations responsibly, respect prevailing values, and adhere to the society's accepted norms of behaviour.

8. Altruism and Generosity:

Emiratis sympathize with others, seek to assist those in need, provide all types of assistance during crises, and do not exclude other peoples. Generosity is one of the most prominent virtues of the Emirates, practiced by individuals, and the Emirati people receive the generous attention from the leadership of the country.

9. Patience and Reverence:

Emiratis lived in hardship in the past, and endured conditions of scarce resources and limited means, but overcame them with patience, cooperation, and contentment. With the advent and growth of the prosperous nation state, the Emirati people live in the rewarding gains of development and enjoy its benefits. They are patient, gentle, humble, and composed.

10. Peace and Harmony:

Peace is a fundamental value for human societies, and peaceful relations provide the appropriate environment for development to flourish and security to endure. Emiratis avoid disputes and conflicts, confront the causes of discord, overcome differences, and aim to settle disputes.

11. Devotion and Dedication:

Emiratis value work and their faith encourages them to insist on perfecting the assignments they carry out. They strive to achieve success and perform their duties. They renounce laziness in performing their responsibilities, reject dependence, and aspire to excellence.

Overall, the various attributes of the Emirati personality relate to four main sociocultural aspects, including life perspective, human interaction, good citizenship, and the Emirati traits. The Emirati personality incorporates the relevant components necessary to live productively and stably within the requirements of modern society. Therefore, the Emirati people represent a distinctive civilized country in the local, regional, and international contexts.

Conclusion

The United Arab Emirates is a viable nation state and an admirable reality in the contemporary world. Its solid presence confirms the UAE leadership's belief in the valuable philosophical goals and vital practical benefits of the idea of the state for human beings. The UAE's remarkable successes embody the importance of the wisdom inherent in transforming the idea of the state from a noble, abstract goal into a tangible reality. The country's prominent presence reflects the importance of governmental institutions and the UAE's devotion to comprehensive development. The ambition of the Emirati people to live as citizens under the umbrella of the nation state has been fulfilled. The UAE people respect the rights and duties specified by the UAE constitution and appreciate the benefits of comprehensive development.

The state in the UAE is characterized by its federal structure which defines its institutional arrangements, characterized by the presence of federal and local levels of government. The UAE constitution specifies the federal institutions and allocates sovereign powers at the federal and local levels. As a result, political powers are exercised by the federal authority, on one hand, and the local authorities in the seven emirates, on the other. The federal government and local governments seek to achieve the interests of the nation state. The UAE citizens and residents live under the institutions, laws, and policies within the two levels of government, and realize the normative virtues and practical benefits brought about by the federal state.

The state embraces the Emirati national identity rooted in the people's conscience. The UAE national identity unites and distinguishes Emiratis from the rest of the peoples of the world. The strong moral bond of the shared national identity among Emirati citizens contributes to strengthening the governmental institutional relationship between the seven emirates in the federal state. Several parties, including the individual, family, society, and institutions, mutually embody and responsibly protect the Emirati national identity. Sustaining the Emirati national identity ensures that the UAE proudly maintains its sovereignty, as a member of the international system composed of about two hundred countries, each of which has its own national identity.

The intellectual underpinnings and empirical implications involved in the nation state, the federal state, and national identity have contributed to the creation of the Emirati personality. The general features of the Emirati personality reflect the philosophical principles, emotional tendencies, and behavioural manifestations through which others see the Emirati person. The role of the Emirati personality also extends to influencing the principles, stances, and policies that have always characterized the UAE and through which other governments and nations view the UAE in the global context. The Emirati personality represents the honourable national moral traits. This personality shapes the commendable Emirati behaviour and, therefore, the politics and citizens of the UAE receive respect and appreciation at the local, regional, and global levels.

Sheikh Zayed bin Sultan Al Nahyan is the founding father of the United Arab Emirates. Sheikh Zayed's intellectual contributions are related to the nation state, the federal structure, national identity, and the Emirati personality. Sheikh Zayed explored the appropriate philosophical questions, effectively responded to them, and successfully implemented the best answers to these questions. The UAE society has been making the developmental achievements in various fields. Accordingly, Sheikh Zayed is considered an ideal model of political leadership, and this model is a source of inspiration for the UAE political leadership. Therefore, the UAE leadership confirms the objectives of the nation state, strengthens the gains of federal structures, protects the essential components of national identity, and preserves the characteristics of the Emirati personality.

Footnotes

- (1) For more details about the concept of the national state, refer to - Mostov, J. (2014). Nation and Nation.9781118474396/State. In The Encyclopedia of Political Thought, M.T. Gibbons (Ed.).<https://doi.org/10.1002.wbept0695>
- (2) For more on the development of the idea of sovereignty, please refer to Jackson, Robert, 2007. Sovereignty: The Evolution of An Idea, Cambridge: Polity Press. Also refer to: Grimm, Dieter, and Belinda Cooper, 2015. Sovereignty. The Origin and Future of a Political and Legal Concept, New York: Columbia University Press
- (3) Max Weber's definition of the state includes a basic requirement; the state monopolizes legitimate use of violence. For more explanation and evaluation of this idea please refer to Anter, Andreas, 'The Modern State and Its Monopoly on Violence', in Edith Hanke, Lawrence Scaff, and Sam Whimster (eds), The Oxford Handbook of Max Weber, Oxford Handbooks (2020; online edn, Oxford Academic, 11 Feb. 2019), <https://doi.org/10.1093/oxfordhb/9780190679545.013.13>, accessed 31 Jan. 2024
- (4) For a detailed discussion of the concept of citizenship, please refer to Leydet, Dominique, "Citizenship", The Stanford Encyclopedia of Philosophy (Fall 2023 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <<https://plato.stanford.edu/archives/fall2023/entries/citizenship>>
- (5) For more about the concept of national constitutions by reading. Elkins Z, Ginsburg T, Melton J Conceptualizing Constitutions. In: The Endurance of National Constitutions. Cambridge University Press.:64-2009: 36
- (6) To view the Constitution of the United Arab Emirates, please refer to - <https://uaecabinet.ae/ar/the-constitution>
- (7) To view the development of the concept of federalism and its applications during the period from the seventeenth century to the first century for an evaluation of federalism, please read Karmis, Dimitrios, and Wayne Norman (eds.), 2005. Theories of Federalism: A Reader, New York: Palgrave
- (8) For a more detailed analysis of the federal system in the UAE, please read, Bin Howiden, Muhammad Al-References (2010). Federalism in the Emirates: Theory, Reality, and Future. Abu Dhabi: Emirates Center for Strategic Studies and Research
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Chapter 2

The United Arab Emirates' Position in International Politics

Dr. Ali Hussain Al Ahbabi

Introduction

Founded on December 2nd, 1971, the United Arab Emirates (UAE) is considered a newly established political state. The recent UAE age has posed a fundamental challenge; the state faces crucial questions regarding the nature of its political system and the logic of its foreign policy. From a geographical standpoint, the UAE is classified as a small country in the international system, adding further challenges to its presence in the Arabian Gulf and Middle East regions. Therefore, these challenges make it necessary for the state to adopt a special foreign policy that achieves the aspirations of the UAE's wise leadership on the one hand, and the newly founded state conditions on the other hand.

Firstly, the UAE's foreign policy decision-makers submitted applications to join regional and international organizations, namely the League of Arab States and the United Nations. It is a response to the demand to gain recognition by regional and international countries for the political independence of the UAE and to strengthen the legitimacy of the newly founded federal state. The sudden presence of a new federal system in the Arabian Gulf may lead many countries to hesitate when recognizing it as a federal state and forming diplomatic relations with it, given the region's past unsuccessful attempts in adopting a federal system. The Gulf and Arab countries had doubts about the ability of the new federal Emirati state to continue and that it may not be relatively long-lived when compared to the past unsuccessful Arab federal experiences. However, the determination and leadership of the founding fathers, lead by Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace, formed the unique ability to confront many challenges posed by reality and create an alternate one full of hope, success, and a brighter future.

When examining the UAE from the perspective of strategic components, it is a relatively small state geographically and politically compared to other countries. However, the UAE has many strategic components that enable it to play an active role regionally and internationally in various issues. The UAE's strategic location represents one of its most prominent strategic aspects. The UAE is directly overlooking the Arabian Gulf, one of the most important bodies of water in the region, as well as being located adjacent to the two largest countries found on the Arabian Peninsula: The Kingdom of Saudi Arabia and The Sultanate of Oman. Oil wealth represents another strategic factor which strengthens the UAE's political and economic position and confirms its vital role in regional and global arenas as energy and economics are parts of many international diplomatic talks and negotiations. Within the same context, the UAE's wise political leadership represent a major strategic foundation in the decision-making

process in the UAE's foreign policy. It is through these decision-making processes that we notice the core principles and morals which the UAE's foreign policies are built on. These core principles revolve around humanitarian dimensions focusing on bringing peace and security to all countries of the world.

The UAE's foreign policy focuses on several vital areas including Gulf, Arab, Islamic, and international domains. Through its external behavior and policies, the UAE affirms its firmly rooted national identity with its Arab and Islamic dimensions, consistent with what is stated in its constitution preamble regarding the UAE's desire to establish relations with fellow Arab countries and other nations, revolving around shared love and mutual interests among all parties involved. Additionally, Article No. 12 in the UAE's Constitution explicitly confirms its noble goals when creating foreign policies, which support justice and truth in various Arab and Islamic issues, with the addition of the UAE's commitment to international legal conventions and charters, which it uses to support global peace and security.

The UAE connects ethics with foreign policy by making its foreign policy behavior a translation of the noblest values and principles given by the state and its wise leadership. The UAE adopts a political philosophy that achieves national interests considering the humanitarian commonalities that represent a link between the Emirates and the rest of the world's countries and societies. For example, the UAE has an impressive track record of achievements in humanitarian aid without discrimination in color, race, or religion. The UAE even provided urgent humanitarian aid to countries with which it disagreed with politically. This Emirati foreign policy sets a unique example in linking ethics with foreign policy. In many cases, the UAE disregards other considerations which conflict with the moral and philosophical values of the UAE's internal and external policies. The UAE is politically highly flexible and surpasses narrow meanings to broader horizons, representing the highest values of altruism, benevolence, and tolerance to achieve mutual interest and benefit for all parties.

Accordingly, this chapter addresses the foreign policy of the United Arab Emirates, the definition of foreign policy, the determinants of the Emirates' foreign policy, the goals of the Emirates' foreign policy, and the uses of force in foreign policy. It also discusses Emirati diplomacy and the Emirates' uses of new types of diplomacy, such as religious diplomacy. Additionally, it also explains the UAE's role in international alliances and the UAE's contributions to global issues.

The foreign policy of the United Arab Emirates

What is foreign policy?

There are many definitions of foreign policy. When looking at the literature and considering political science and international relations, political scientists have usually defined the concept of foreign policy differently from one another. This is due to the various applications and practices of foreign policies among the many countries of the world. In this study, foreign policy can be defined as the countries' goals, strategies, systems, methods, guidelines, directives, understandings, and agreements through which national governments can implement and build their international relations with their peers, including international governmental actors and non-governmental actors in the global arena⁽¹⁾.

Determinants of the UAE's foreign policy

Many components and influences specify the main determinants of foreign policy. These include natural components, geographical advantages, and natural resources, as well as the changing material components, economic and military capabilities, and scientific and technical capabilities that the countries employ to compete in the fields of advanced technological sciences at the global level⁽²⁾.

First: Natural components

Natural and geographical components are major factors influencing the foreign policy decision-making process, due to these components representing clear indicators to measure the strength and nature of the state. The natural components help in specifying and classifying where a country is on a scale of strength and size⁽³⁾.

The UAE's natural and geographical components do not make it one of the major countries at the regional level. However, it is evident that the wise political leadership's proper use of these natural and geographical components has been crucial in establishing an optimal national federal state. As a result, the UAE's foreign policy is distinctive and influential at the regional and international levels.

Second: Changing material components

Changing material components play an important role in shaping international foreign policies. The material components, in this instance, mean the economic and military capabilities

of governments. On the economic level, the United Arab Emirates has a prosperous economy, represented by its pioneering development path. Its foreign policy has strengthened its partnerships in the economic fields and fortified its international economic cooperation to achieve global peace and security. Led by the visions of its wise political leadership's, the UAE achieves national economic development and fulfills common goals with its international allies.

At the military level, the UAE's military capabilities rank high according to the Global Fire Power 2024 – ranking it 51st out of 145 countries at the global level. It ranks fourth according to the ranking of the military capabilities of the Arab Gulf states⁽⁴⁾. The UAE's advanced military capabilities influentially achieved peace and security at the regional and international levels. The UAE supports peaceful channels to achieve global peace and stability, rejects violence and sectarian strife, and helps afflicted communities through international means.

Third: Scientific and technical components

The UAE's scientific and technical capabilities strengthen its foreign policy tools and aid in successfully achieving its national interests. The UAE's global policies reflect its tremendous developments in advanced science and technology, enhancing the UAE's political positions throughout foreign issues.

Accordingly, the UAE invested in its advanced scientific and technological capabilities in executing the Barakah Nuclear Project, which is a distinguished achievement at the Arab level in the use of nuclear energy for peaceful purposes. This project finds alternative solutions that provide the electrical power required for the country⁽⁵⁾, in addition to using harmless nuclear energy to produce water through the desalination of seawater.

The UAE's advanced scientific and technological capabilities help open new horizons to strengthen its international relations with many countries with technical, scientific, and technological development, which is known as science diplomacy. The establishment of the Barakah nuclear project represented the result of the achievement of a strategic scientific partnership with the Republic of South Korea. Therefore, in this context, the UAE confirms its endeavor to strengthen its mission to sustain international security, peace, and stability. The UAE's peaceful practices in the use of nuclear energy do not go beyond providing the vital needs for the development of the UAE. The UAE does not seek to change its peaceful approach and transform these uses to achieve non-peaceful or military goals as some regional powers do.

Hope Probe

The UAE's ambitions have exceeded the smart uses of nuclear energy. The UAE took the initiative to move forward its investments in the field of advanced science and technology towards the space sector. The UAE announced and accomplished the successful Hope Probe program. Which reflects the great progress in acquiring knowledge and developing its scientific applications in various fields. The UAE also succeeded in sending the first Emirati astronaut on a scientific exploration mission and sent the first Emirati astronaut on the longest scientific space mission in Arab history, which lasted for six months on the international space station. It is important here to point out that this Emirati achievement is an Arab achievement as well, and it is conclusive evidence that refutes many of the arguments and generalizations that have been formulated about the inability of Arabs to move forward on the path of scientific and knowledge production and keep pace with human civilizational progress.

The naming of this civilizational project, called the Hope Probe, reflects many messages and symbols about Arabs' ability to challenge the impossible and face difficulties, and confirms their will, work, and determination. Creating the future depends on human being's ability to hold on to hope, which is what the UAE is adopting to create a bright future for itself and for Arab and Islamic nations ⁽⁶⁾.

What are the objectives of UAE foreign policy?

The UAE foreign policy derives its objectives from Article 12 of the Constitution of the United Arab Emirates, which clearly and explicitly affirms the following: First: The UAE seeks to support Arab and Islamic issues and interests. Second: The UAE strengthens the bonds of friendship and cooperation with all countries and nations. The UAE relies on the principles of the United Nations and the international ethics ⁽⁷⁾. Based on the UAE's noble goals and principles, the leadership has used foreign policies as a compass which directs the country's positions to various international issues.

The UAE's defense of the issues of the Arab nation

The UAE has spared no effort to support the Arab and Islamic countries through its qualitative and quantitative assistance in various Arab and Islamic issues. The UAE made many foreign policy contributions of which this study has no room to list all of but will list some examples. The UAE's foreign policy reflects the noble intentions of supporting their fellow Arabs in crucial issues. Since its inception, the UAE has declared its commitment to a clear and frank approach to supporting various issues for regional and international security and

peace. The UAE foreign policy, throughout history, has always opted for peace and resorted to diplomatic tools as a priority to resolve all regional and international issues, including the Lebanese Civil War 1975-1990, the Iran-Iraq War 1980-1988, the Second Gulf War in 1990, and other regional and international conflicts.

In 2003, shortly before The United States of America declared war on Iraq, The UAE, through its Minister of Foreign Affairs, His Excellency Sheikh Abdullah bin Zayed Al Nahyan, presented a peace initiative. It was in the name of Sheikh Zayed bin Sultan Al Nahyan; To spare the Republic of Iraq from engaging in a losing war, and to spare the blood of Iraqis to protect them.

The uses of power in the UAE foreign policy

In politics, the several uses of power have generally various applications and abilities to change reality. Therefore, it is necessary to address the basic concepts of the theory of power in general. One of the definitions that can be used for the concept of power is to imagine it as an embodiment of the patterns of relationships that arise between individuals. It can be expressed in a simple symbolic notation ⁽⁸⁾. To understand the nature of individual relationships by exploring the force that dominates the behavior of individuals through the following: The first party (a) has power that makes the other party (b) do things that may be against its own will ⁽⁹⁾. This symbolic definition means that the element of coercion is the main driver of the idea of power and its applications. The meaning of the use of force cannot be understood. One of the clear and direct manifestations of force is the application of the concept of hard power. It expresses the direct use of military tools to achieve national goals and interests. The previous concept of force is opposite from the concept that expresses a new development in the theory of soft power. It has widespread uses in international relations. Accordingly, the American political scientist, Joseph Nye provided us with a specific concept of soft power; it is the ability to make one party do what the other party wants without using the tool of coercion. The use of soft power is persuasion and submission to this desire voluntarily ⁽¹⁰⁾. Hence, soft power never relies on coercion as a tool to achieve national goals.

Therefore, the uses of power can be clearly defined at individual, collective, or institutional levels. It applies the topics of international relations between various actors in the global system. Most international interactions of various forms, such as wars and regional and international armed conflicts are products of the uses of hard power that depend primarily on military strategies and tactics. In addition, the different political interactions of countries' foreign

policies have resulted in a new type of power, smart power, which represents development in the applications of the theory of power that combines the hard and soft powers. Therefore, smart power expresses the ability of the political actor to combine the hard and soft powers in a way that is mutually reinforced in the application of foreign policy strategies effectively and efficiently ⁽¹¹⁾.

The UAE's foreign policy strategy depends effectively on the applications of soft and smart powers in determining its position on various regional and international issues. Since its inception, the UAE's foreign policy has used quiet diplomacy, as it applies soft power in its strategic choices and smart power in its effort to maintain global peace and security. The UAE deals with many complex regional and international issues that require a special use of force to address the political complexities of certain situations.

The UAE supported the legitimate government in Yemen in confronting the devastation caused by the Houthi group. It led to tampering with Yemen's capabilities and threatening its security and safety. Therefore, the UAE and the Kingdom of Saudi Arabia responded quickly to deal with the security situation and its repercussions on the security of the Gulf region and the Arabian Peninsula. Accordingly, the UAE decided to join Saudi Arabia in an Arab coalition aimed at ensuring the safety of Yemen, a position that requires the application of smart power that depends on the use of military strategy with diplomatic endeavors to achieve the desired stability.

The UAE has indeed used smart power, but this use was in response to special circumstances. The UAE's foreign policy depends on diplomacy and soft power. It relies on several basic sources in the process of making its external decisions according to soft power, which are: First: Civilization: the UAE is committed to the civilizational approach that reflects the logic of a sound political approach that shapes its internal and foreign policies. Second: Modernization: the UAE has been committed throughout history to balanced modernization that ensures its development at various levels and fields and leads to achieving comprehensive development goals. Third: Tolerance and Openness: The UAE upholds the values of tolerance and coexistence that enhance understanding and acceptance of others, which has made Emirati society able to accommodate more than 200 different nationalities in the UAE. Fourth: Foreign Aid: Since the establishment of the UAE, the leadership has urged the provision of aid to the needy, without differences in race, religion, or culture. It is purely humanitarian motives, embodying the principles of the founding leader, the late Sheikh Zayed bin Sultan Al Nahyan - May his soul

rest in peace ⁽¹²⁾. The UAE established the Soft Power Council, which reflects the vision of the leadership and its desire to make the UAE's foreign policy in light of the principles and values of soft power, to enhance the UAE's role and position at the regional and global levels.

World Culture and Louvre Museum

The UAE is interested in the global dimension of culture by attracting the most famous cultural landmarks in the world. In 2017, the government of Abu Dhabi and the Republic of France announced the project to open the Louvre Abu Dhabi, which is an important historical landmark. At the same time, it confirms that the UAE remarkably embraces the history of the world arts. Museums play a vital role in documenting the popular and collective memory of people. They also preserve the most important artistic and historical pieces. The museum also strengthens the UAE's trend in moving towards diversifying new sources of income besides oil. The UAE uses museums to market its unique culture and history in the global arena. Hence, the Louvre Abu Dhabi enhances the dialogue of cultures through the convergence of this wonderful accumulation and interaction of arts and culture in the capital of the UAE ⁽¹³⁾. As a result, Abu Dhabi is highly qualified to be the capital of Arab tolerance. This global embrace of culture thought, and arts also confirms that the UAE society embraces the values of tolerance and coexistence and expresses its ability to be open to the world in a smart and balanced manner. This also enhances the authenticity of Emirati culture and acquires knowledge of other contemporary cultural aspects. Accordingly, cultural soft power has enabled the UAE to assume a prominent global position in the field of cultural creativity. This also encourages many countries to establish strong cultural relations with the UAE.

Emirati passport as a new soft power

The Emirati passport has a prominent global rank in the many global passport power indexes that monitor the privileges of passports in terms of facilities related to entry procedures to countries of the world. According to the global rankings for 2024, the UAE passport is ranked 14th in the world. Emirati citizens can travel to 181 countries in the world without a prior visa ⁽¹⁴⁾. This global achievement of the UAE passport is an indication of the effectiveness of the UAE's diplomatic power and the country's gain of respect from many countries on the global scene. The UAE's balanced policy expresses its foreign positions on various issues and topics. This achievement is another confirmation of the success of the soft power policy in the UAE Ministry of Foreign Affairs and a cumulative result of all the efforts and actions that resulted from the application of moral principles and values in the UAE's foreign policy. The UAE assumed a global position among the countries, gained the trust of many countries, and strengthened its international relationships.

Emirati Diplomacy

Definition of Diplomacy

On one hand, the term diplomacy is related to the state's foreign policy. It is the most effective foreign policy tool for achieving the national interest. On the other hand, many political analysts and scientists describe countries' policies with the word diplomacy, such as humanitarian diplomacy, preventive diplomacy, and environmental diplomacy. In general, diplomacy is "the process of representation and negotiation that takes place between states in the course of management of their international relations" ⁽¹⁵⁾. The definition refers to the procedural aspect of the state in establishing its foreign relations with other states. Others explain diplomacy as "the means followed by international law person for the conduct of foreign affairs by peaceful means, especially through negotiation" ⁽¹⁶⁾. The previous definition emphasizes on the nature of the peaceful means upon which diplomacy depends in managing international relations.

Economy and Diplomacy

Economics and diplomacy have a close relationship and the diplomatic practice usually results in joint economic deals and projects between countries. In addition, successful diplomatic endeavors guarantee the continuous relationship of peace and cooperation between various international parties. Economic diplomacy has emerged in modern Europe and has been remarkably active after World War II. Many countries seek to establish international economic organizations at the global level ⁽¹⁷⁾. Accordingly, economic diplomacy achieves the best peaceful options for all parties, enemies or allies. It plays a pivotal role in enhancing cooperation between partners and allies. It also significantly solves conflicts without resorting to hard power practices ⁽¹⁸⁾. In addition, it effectively deepens economic relations and interests between countries and enhances the chances of economic cooperation. This may lead to political understandings that limit the spread of global conflicts.

Religious Diplomacy

The idea of merging the Abrahamic religions with politics is the most significant development in a way that supports global stability and peace. Historically, many wars and conflicts have been characterized by religious differences that have intensified the political differences between many countries and sects. For example, the religious wars that took place in Europe, and the civil wars of a sectarian religious nature were more deadly than the wars that resulted from political or economic differences. Hence, spiritual diplomacy is an innovative trend in international politics

that would reduce the severity of international conflicts by bringing viewpoints closer together by focusing on the common points that unite these religions.

What is religious diplomacy?

Religious diplomacy includes non-national actors who have a pattern of authority different from the authority of political entities, namely religious authority. Accordingly, religious diplomacy can be defined as the ability to politically use the human religious commonality between different religions to direct it toward addressing global issues. The unity of the different Abrahamic religions (Islam, Judaism, and Christianity) is the heavenly revelation and the divine source for these Abrahamic religions. They can play an effective role in confronting many global issues through the influence of high-ranking religious figures. This affects the direction of institutions and the interaction of individuals with global challenges.

The UAE and Religious Diplomacy

Religious diplomacy can alleviate regional and international conflicts and unify the visions and efforts of different religious sects under the slogan of common humanity. In this context, the UAE employs religious diplomacy as a new and innovative tool in its foreign policy to ensure achieving its goals through its internal and external policies, which include: First: Strengthening the security and stability at various local, regional, and international levels. Second: striving to consolidate the elements of civilizational progress, comprehensive development, and prosperity. Third: Promoting the values of tolerance and coexistence among different sects⁽¹⁹⁾.

In this context, the UAE has translated these universal values that express common humanity by employing religious diplomacy to communicate its vision to the world, in an attempt to change the reality of the global issues. The UAE is aware of the difficulty of changing reality completely, but it never falters, rather contributing more to creating an alternative reality that expresses humanity's aspirations to have a reality that accommodates all people of all walks of life and guarantees people justice, humanity, and dignity.

Accordingly, the UAE government established the Ministry of Tolerance in 2013. The ministry promotes the idea of tolerance as a societal and cultural value in UAE society. In confirmation of this important moral value, the late Sheikh Khalifa bin Zayed Al Nahyan - may his soul rest in peace - declared 2019 the Year of Tolerance. It witnessed the announcement of the Document on Human Fraternity, which promotes the values of religious tolerance. With this historic step, the UAE's soft power has recorded history by attempting to bring common

humanity together with the heavenly religions and rejecting violence in all its forms.

The importance of human heritage is sufficient to create new human relations between members of various religious sects. This paves the way for creating generations to extend cooperation and peace and reject violence in the world. The leaders of the Islamic and Christian religions, His Eminence the Grand Imam Dr. Ahmed Al-Tayeb and His Holiness Pope Francis signed the document, which would bridge the gap between the two religions. It overcomes all differences and passes to a broader field that includes everyone, which is the field of humanity. The UAE also ranks highly in foreign humanitarian aid. The UAE foreign policy indicates the best manifestation of humanity.

The UAE and International Alliances

The UAE's contribution to international alliances meets the desire for a multipolar global system, which contributes to strengthening the idea of cooperation and participation between various international powers and parties. Therefore, multipolarity in the international system contributes to creating a peaceful international environment that enables cooperation and exchange of interests.

The UAE's foreign policy always seeks to translate moral principles and values through its active contribution to international alliances. These alliances represent a unique opportunity for countries of the world to unite and cooperate among themselves. In addition, international alliances help many countries move toward the values of cooperation and altruism rather than paying attention to policies that call for intolerance or inhuman competition. Hence, actively joining international alliances is ethical behavior for countries in the global arena. At the same time, it deepens the humanitarian tendency of global politics.

In this regard, the UAE has joined the International Maritime Security Construct. This is based on its belief in confronting any danger that threatens the security and safety of international maritime trade, which has negative effects on the economies of countries and disrupts the global economy. Moreover, it confirms the importance of international and maritime trade, it creates opportunities for cooperation between countries and primarily alleviates the severity of regional and international conflicts and struggles.

The UAE has always and forever affirmed its peaceful policy calling for strengthening global peace and security. It also rejects violence and its uses outside legitimate and international scopes. In this context, the UAE's effective and influential role joined the international coalition

against the terrorist organization ISIS in 2014. It is a clear and explicit translation of the UAE's policy in confronting all forms of intellectual and religious extremism. It is based on the foundations of violence and rejection of others, which reinforces the destructive intellectual perceptions and political ideologies that destroy human societies by killing them, starving them, and forcing them to live in oppressive conditions. Accordingly, the UAE foreign policy aspires to create humane societies based on stability and prosperity.

The UAE expresses its honest and sincere intention regarding the importance of protecting and defending the environment. The UAE took the initiative to apply for membership in the Global Alliance on Green Economy to advance environmental conservation processes and ensure the reflection of these moral philosophical principles and values in support of the environmental political thought in the institutions of countries and international organizations. The UAE promotes international organizations' ideas, principles, policies, and procedures to aid in achieving the desired goals of protecting and preserving the environment.

The UAE's contributions to global issues

Expo Dubai 2020

The UAE was the host of Expo 2020, which confirmed its position in high global standing and its ability to professionally manage global events. In addition, many countries approved the UAE's nomination request to host this important event, bolstering its confidence. This global exhibition represented a unique opportunity for the UAE to show the world its strategic plans that reflect the aspirations of the leadership in seeking to complete the process of achievements through the themes adopted by Expo 2020. These themes promote the country's trends in future issues related to sustainability, the shape of the future, and smart cities. In addition, the UAE's hosting and management of this global event has enhanced opportunities to strengthen strategic partnerships between countries of the world and increased the possibility of seeking to create new economic and development opportunities that would address the global challenges faced by various peoples and nations. This global event strengthened the UAE's position among the nations of the world as a prominent middle power on the international scene.

COP28 Conference of the Parties

The UAE nominated itself to host the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP28), which the UAE hosted in 2023. Such interest reflects the UAE's priority in defending environmental issues and is inspired by the principles of the founding leader Sheikh Zayed bin Sultan Al Nahyan - may his soul rest in

peace - seeking to promote the idea of sustainability and defend the environment and its issues. The UAE's management of the COP28 Conference of the Parties represented a qualitative leap in progress. It made achievements that require many countries to reduce gas emissions and confront global environmental challenges ⁽²⁰⁾.

The UAE managed the COP28 Conference of the Parties successfully and effectively through the historic agreement that resulted from this session. It also mobilized international efforts to improve climate action to ensure environmental sustainability and protection. Its efforts also succeeded in announcing a global fund worth \$ 30 billion to find climate solutions and facilitate climate funds. Accordingly, the UAE's efforts in supporting global climate action move towards green political thought and create a new global awareness of environmental issues. At the same time, it develops public policies that support environmental protection and preservation for a prosperous human future.

Pandemic Diplomacy

Throughout the political history of countries, traditional factors, such as energy resources and political borders, have shaped the most prominent factors that formed the relations of peace and war between the countries of the world. However, the emergence of other new factors on the international scene, such as the spread of diseases and global epidemics, played a pivotal role in the formation of contemporary international relations. The spread of epidemics does not discriminate based on race, color, or religion, which puts all nations in one row to confront this global challenge. This joint confrontation of the countries of the world has formed a new type of external behavior of countries, which is epidemic diplomacy. It has created channels of cooperation between countries suffering from the spread of the epidemic.

The aspects of cooperation between countries are represented in the issue of searching for the best ways to confront the spread of the epidemic through scientific research. The spread of the Corona Covid 19 epidemic represented a crisis that confused countries and societies of the world, to the point that these countries could not provide the required cooperation among themselves to unify efforts in confronting this global epidemic. In contrast to the above, the UAE has practiced a foreign policy based on pandemic diplomacy; the UAE was the first to provide cooperation and aid to many affected countries. By exchanging data and scientific analyses of the pandemic, the UAE provided vaccines that would fight the pandemic and strengthen the global front to overcome this epidemic.

The UAE's policy in confronting the Corona pandemic has proven a remarkable success in limiting the spread of this epidemic. The UAE decisively designed a national strategy to contain the pandemic. This represented a rapid response built on solid scientific foundations and supported by the results of scientific research. The UAE applied the World Health Organization's strict procedures to deal with the disease. The UAE realized in advance the danger of this global epidemic to human life. The UAE imposed precautionary and preventive measures that had a significant impact in curbing the rapid spread of the infection. As a result of the response of its federal and local institutions, the UAE established examination centers at the state level to conduct the necessary tests for early detection of cases of Coronavirus infection. This led to the UAE being ranked first in the world in the record of conducting field laboratory tests to detect coronavirus cases. It indicates the extent of the state's seriousness and effectiveness in confronting various health risks. It also reflects the political leadership's focus on prioritizing the safety of the UAE citizens and residents.

The enormous capabilities that the UAE was able to employ in creating a national strategy to deal with the pandemic had a global resonance that reflected the flexibility of government administrative agencies in quickly reacting and responding to the crisis that the country is going through. Not only that, but the state's plan did not neglect the need to pay attention to the economic aspect, which was greatly damaged because of the spread of the epidemic. The UAE has provided economic packages to alleviate the impact of the crisis on its economic performance.

Remarkably, the UAE has gained a global status, because it dealt efficiently with those affected by this global epidemic. Many countries took measures not taking into account the psychological impact; the UAE provided a unique model of implementation. For example, many countries imposed a curfew on citizens and punished anyone who violated this decision. The UAE implemented the same idea but in a different manner. The UAE established the National Sterilization Program, which applies the curfew to the cities of the country. The concerned and responsible authorities achieved the goal of the curfew to isolate and sterilize the usually crowded infected places for the sake of sterilization and vaccination. At the same time, the UAE succeeded in avoiding spreading panic and fear among the individuals. The UAE achieved the required balance in imposing the curfew, considering the difficult circumstances that society was going through as a whole.

Accordingly, the UAE has set the most wonderful examples in its response to the requirements of confronting the Corona epidemic. This indicates the UAE's readiness to deal

with crises and adapt to the changing circumstances. This indicates also the UAE government's previous investments and the leadership's proactive vision.

The UAE has flexibly transitioned from in-person education to distance education. Many countries have suffered in the issue of transitioning to distance education due to their lack of prior preparation for such an event. The UAE government has also focused on development in government work. The UAE government has gone through many models that simulate the necessities of change and adaptation to the variables of institutions, including smart government and e-government. The UAE focuses on the artificial intelligence government.

Thus, the UAE has gained a global reputation and assumed an international position in its experience in dealing with this global epidemic. The UAE followed procedures scientifically and professionally enabling it to play a global role in strengthening channels of cooperation and joint confrontation of this humanitarian challenge. Many countries failed to confront the epidemic effectively. This led to confusion in their health institutions, and were unable to overcome the global crisis.

Renewable Energy

The United Arab Emirates adopted the principle of not relying on traditional energy sources as the sole source of energy. The initiative steadily moves towards renewable energy sources. In 2012, the UAE began the construction of the Barakah Nuclear Power Plant. It is an important source for meeting vital energy requirements, such as electricity and water desalination⁽²¹⁾. This move comes from the leadership's belief that traditional energy sources, especially oil, will not be sustainable and are running out, mentioned in the expressive speech delivered by His Highness Sheikh Mohammed bin Zayed Al Nahyan - may God protect him - in 2015 during the World Government Summit. The UAE diversifies investments; therefore, it will celebrate the export of the last barrel of oil after fifty years. This future strategic vision expresses the wisdom and rationality that must be used to manage the energy in the UAE. The federal government has translated these ideas and principles launched by Sheikh Mohammed bin Zayed - may God protect him - into its strategic plans and agenda.

The UAE is committed to investing in the field of renewable energy represented by solar energy. The UAE has the Shams solar energy generation project, which is the first station to provide renewable energy services. As part of its strategy to achieve renewable energy goals, the Emirate of Dubai established the Mohammed bin Rashid Al Maktoum Solar Park. It is the

largest strategic project to generate clean energy in the world. These investments in renewable energy have enabled the UAE to be among the developed countries in this vital field. Thus, it has achieved a prominent international position with its tireless efforts to support the environment for a bright future for the next generations.

The role of the UAE in the UN Security Council

The UAE gathered international trust because the United Nations General Assembly elected it as a member of the UN Security Council from 2022 to 2023. This impressive achievement for the UAE and Arabs was the result of the sincere efforts made by the UAE Emirati competencies represented by the Ministry of Foreign Affairs and its diplomatic missions, which represent the UAE in the best possible manner. Through its membership in the Security Council, the UAE presented a balanced approach to various international issues. The UAE has taken the initiative, in the Security Council to support the interests of the issues of the Arab and Islamic worlds. It influentially supports peaceful means and resorts to diplomatic tools in cases of conflicts and disputes. The UAE played an international role in the UN Security Council. It enhanced international recognition of the UAE's global position among various nations and states. The UAE's role in the Security Council reflects the tireless efforts in promoting international pluralism and enhancing the opportunities for cooperation and peace between countries.

The UAE's global reputation:

Many elements contribute to shaping and building the UAE's global reputation. The UAE's prestigious position is a result of joint efforts between the state and society that resulted in the country's rise to this global status. Below, I will list some of the features that make up the UAE's global reputation, which express two basic groups: The first is the group of features related to the individual and collective behavior of Emiratis, while the second group represents the features related to the behavior of the state and society at the internal and external levels. As a result, these two groups combined represent the reasons for the UAE obtaining this global reputation.

Chivalry and Nobility:

These two characteristics represent the most prominent elements of Emiratis' behavior. They are known as "Zayed's sons," an expression that reflects the Emiratis' close connection to moral principles and values inspired by the thought of the founding father, Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace. Therefore, the Emiratis highlight chivalry in their behavior when dealing with others. Nobility also supports chivalry and expresses the authentic

meanings of the Arab personality and culture that Emiratis proudly embrace.

Progress and Future:

The UAE achieves the high ambition of making human achievements and rejects any narrative statements that would frustrate this ambition, such as “Arabs are outside history” or “Arabs do not produce civilization. The UAE depends on the cultural and cognitive legacy that Arabs have provided to humanity. In this context, the UAE is trying to revive the Arab civilizational progress that stopped many years ago, and now it is time for its revival. The UAE’s ambitious projects are in the context of reviving the Arab advancement and contributing to scientific and technological progress, to achieving a better human future.

Emirati model and humankind:

The UAE has succeeded in its quest to build a unique civilizational development model in the Middle East region, based on investing in people and enhancing human talent and constructive capabilities. This unique Emirati model represents a point of attraction for many Arab youth who see the UAE as a new opportunity to achieve their dreams and stay away from all forms of development distractions, such as wars, conflicts, and humanitarian crises that spread in most regions of the Middle East. Therefore, the successful Emirati model represents an opportunity for the Arab dream and hope everyone in this region needs.

Ability and Competence:

It is not easy to combine ability and competence, as many countries are proficient in one trait rather than another. However, the UAE has a high ability to manage various global events. It recorded the most wonderful and brightest achievements as it organized Expo Dubai 2020 and the COP28 Conference of the Parties. These achievements also reflect the combination of ability and competence in the UAE’s management of these events. This enabled the UAE to gain the trust of other countries and proudly give the UAE a global reputation.

Leadership and Pioneering:

The UAE is interested in developing and advancing government work by implementing the general intellectual orientations of the UAE leadership, which have a great impact in advancing government work in the country. It also pays great attention to developing government performance in countries around the world, which is evidence of the UAE’s selflessness and active participation in extending a helping hand by providing the necessary support to develop expertise and knowledge related to government work. Accordingly, the UAE has been holding

the World Government Summit annually since 2013, in which it discusses the most prominent issues related to developing government structures and increasing the effectiveness of the impact of government performance on the ground. It also announces incentive awards for the most successful practices and initiatives related to developing government work, such as the Best Government Minister Award.

Donation and Charity:

The UAE charity helps the needy and the afflicted. The UAE has a long record of providing humanitarian aid to those who need it around the world. It makes every effort to help those in need without discrimination based on race, color, or religion. Since its foundation in 1971, it has adopted this humanitarian behavior into its policies, as confirmed by the founding father, Sheikh Zayed bin Sultan, may his soul rest in peace. The UAE's wise political leadership will continue this supportive approach firmly. It aims to help, and protect people and provide opportunities to change the painful reality into a future of hopes and ambitions.

Tolerance and Positive Openness:

The UAE values tolerance as it is proud of its ability to accept the other and believes in the coexistence among human beings despite all these differences and secondary considerations of human societies. The UAE also adopts a view of positive openness towards the world, it welcomes moving forward with internationalism. However, at the same time, it believes in adhering to the authentic Emirati heritage, applying the principles of balance and moderation. This ensures the intelligent movement of the state and society in meeting the requirements of contemporary civilizational development and protecting the gains of the state and society. Thus, the UAE achieves the ideal equation that enables it to have a distinguished international reputation.

Strength and Determination:

The UAE represents the ideal application of the duality of strength and determination, in that it employs the possible sources of strength for its policies in an intelligent manner and supports and motivates this use with a solid determination stemming from the sincerity of the proposal and bearing the responsibility for its implementation. In this way, all challenges are overcome and all the negatives that may face are eliminated. Thus, this duality represents a factor that confirms the country's reputation globally, as evidenced by the fact that the UAE can implement its promises and translate them into a lived reality. This is what the wise leadership

confirms by saying that the UAE always says what it does and does what it says.

Conclusion

This chapter addresses the UAE's position in international politics. Despite being a new state, the UAE has succeeded in making a remarkable presence in the international arena. Despite strategic challenges such as limited resources, the UAE's wise political leadership has turned these challenges into positive factors due to the magnitude of the UAE's civilizational achievements in the past fifty years.

The chapter also addresses the UAE's foreign policy by defining UAE foreign policy, its determinants, and its fixed goals and strategic dimensions. The chapter also attempts to discuss the dimensions of the use of force in UAE foreign policy. The chapter therefore addresses the issue of Emirati diplomacy and how the Emirates kept pace with developments of diplomatic theory and adopted some of such theories in its foreign policy.

The UAE believes it is necessary to resort to diplomacy as an effective tool for peaceful means of reducing international conflicts. The UAE is interested in practicing religious diplomacy, which depends on human-religious commonalities to reach points of agreement that advance cooperation and distance itself from any conflicts that require the use of violence and military force.

The chapter also addresses the role of the UAE in international alliances. The UAE is a country that believes in achieving international peace and security. In addition, the UAE joined international alliances whose goals include consolidating the legitimacy of the international community and alleviating the negative effects that many countries suffer from to create stable and prosperous societies. This chapter also discusses the UAE's contributions to global issues, such as enhancing opportunities for cooperation and entrepreneurship by hosting Expo Dubai 2020, supporting environmental protection, and activating the role of countries in adopting environmentally friendly policies by organizing the global event of the Conference of the Parties COP28. Finally, the chapter identifies the possible basic features of the UAE's global reputation, some of which are related to the individual and collective behavior of Emiratis in their dealings with others inside and outside the country, and other features which are closely related to the country's behavior at the external level, which has enabled the UAE to achieve this global reputation.

Footnotes

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Chapter 3

Fundamental Values and Traditions

Dr. Souad Zayed Al Araimi

Introduction

This study is enlightened by the UAE Vision 2021 - 2071, which aims to “maintain the system of Emirati moral values for future generations”.⁽¹⁾ Accordingly, the study discusses the fundamental Emirati values and traditions in form, and content and identifies the fixed authentic and changing values. Human values are not fixed just like social phenomena. There are fixed ideological values that do not change, and they stem from Islam. The Arab sociologist, Abdul Rahman Ibn Khaldun, reviewed in the “Introduction” the changes and relationships of the fixed basic social values. They include loyalty, belonging, interdependence, solidarity, justice, honesty, faithfulness, chivalry, generosity, compassion, tolerance, respect, hard work, organization, combating corruption and social deviations, and achieving goodness and righteousness for all members of society. These values are the foundation of the civilization on which the social, political, economic, and cultural systems are built stemming from the educational rules. Ibn Khaldun focused on the concept of education and its importance in creating community values, personality formation, the role of the family in education, and the impact of the social, cultural, and religious climate on the moral and educational system. The educational heritage of Ibn Khaldun is an essential element in the educational rules and as a comprehensive and integrated concept in Islamic society.⁽²⁾

The French sociologist Emile Durkheim considered that values are the foundation of the social structure and maintain its formation and cohesion.⁽³⁾ He warned against the erosion of traditional values in changing societies. He focused on the standards and moral philosophy that constitute the true fort against the collapse of values.

The French sociologist Jean-Jacques Rousseau considered that the system of social values is the basis for education and community cohesion. The family is the first teacher through which the young person enters the paths of life, starting with social upbringing and ending with solidarity and social cooperation. The generations acquire values from society, and the family is not a separate institution, rather, it is the cell and creation of society.⁽⁴⁾

The American sociologist (Talcott Parsons) focused on the cohesion of the social structure and the integrity of the system of social values and standards. The change that affects the structure of any social institution, including the family, must create its balance with the conditions, speed, and intensity of the change. Each developmental stage has its circumstances, values, and standards. The society must adhere to these conditions. For the moral system to be able to carry out its vital tasks, the family and society must enter new evolutionary stages.

Parsons believes that change is a natural condition and an inevitable result, but a change in the value system must not be left to its circumstances, rather its paths must be directed along the line drawn in advance. Change must lead to positive results by creating a functional balance between basic traditions and transformed values. When a certain defect occurs in the functions of the basic values expectedly and naturally, it must be avoided by linking the parts of the disintegrated value system together.⁽⁵⁾

In this chapter, the Emirati basic values and traditions will be discussed in form and content, and the fixed authentic and changing values will be identified. The chapter has four sections, which are as follows:

Section 1: Core Values

1. Definition of values
2. Religious belief and social values
3. Future value system

Section 2: Basic Traditions

1. The basic rules of tribal values
2. Genealogy as a basic tradition
3. Tolerance as an exchange value

Section 3: Social Components

1. Social justice
2. Social solidarity and collective feeling
3. Constant and variable social standards

Section 4: Challenges Facing National Values

1. Globalization and cultural challenges
2. Challenges facing the Arabic language
3. Social media

Section 1: Core Values

1. Definition of values:

Philosophers and thinkers have discussed the values throughout the early ages of humanity, before Christ, and after the apostles and prophets who came as guides to the right path to establish justice, equality, values, and morals. The last Prophet, Muhammad, peace and blessings be upon him, came with an integrated life system, as he said, “I was sent only to perfect good morals.” Values have remained the main concern of clerics of all faiths sociologists and politicians. The values have different perspectives and the same goals. According to the definition of the Arabic Dictionary,⁽⁶⁾ social values are a set of principles, standards, and criteria governing human thoughts, beliefs, and trends. They are the religious, moral, and social virtues on which the principles of human society are based. In sociology, social values are the prevailing culturally desirable characteristics or qualities. It is a tool for maintaining the social order in light of political and economic changes. Social values are the characteristics or qualities desired by the group, which direct the behavior of individuals and define the difference between right and wrong.

Social values are defined as the ethics and standards of individuals and social groups to determine personal goals and shape the social system. The definition of what is acceptable or unacceptable, what should be or should not be, and what is desirable or undesirable.⁽⁷⁾ Values are common beliefs about important social issues, which are true or false beliefs about how things should be. Values are essential in validating standards, i.e. normative rules of basic traditions, and without reference to standards, basic values may lack motivation, direction, and perhaps justifications.⁽⁸⁾ Shared values can also change over time, but this process is usually slow. This means that values tend to be appropriate to the historical period recognized and accepted by members of society.⁽⁹⁾ Moral values include honesty, justice, tolerance, integrity, courage, empathy, friendship, equality, respect, modesty, and self-discipline.

Social values in Emirati society focus on adherence to Islamic principles and knowledge, fulfilling national duties, taking pride in state symbols, respecting leaders, and preserving national achievements. Social values include family, community, social cooperation, social responsibility, social justice, solidarity, and respect for cultural diversity. Social values also fall within a comprehensive and general framework, which is the preservation of the Emirati traditions (uncodified) i.e. unwritten laws, which are summarized in (Al-Sana’),⁽¹⁰⁾ it contains narratives, literature, customs, traditions, authentic customs, and ethics. Original social values

are concerned with adhering to the etiquette of dialogue, listening, good behavior, and respect for others. Traditional values such as (synergism, request for help, and protection) focus on generosity, cooperation, altruism, and sacrifice.

The contemporary Emirati society has many values that are not homogeneous acquired from imported values. Communication creates values that contradict and conflict with societal trends. Despite their direct influence, the Emirati values absorbed external ones with all their cultural dimensions. The state's efforts to limit external influences on authentic cultural heritage put society's readiness in advanced positions. External input affects the authenticity of local values, as each nation has special characteristics that distinguish them from others. The local culture's directly connected attributes represent elements of strength in the core value system.

2. Religious belief and social values:

The people of the United Arab Emirates adhere to the true Islamic religion. Islam constitutes an ideological unity that includes life in all its details and embodies worship in all its spiritual dimensions. Islamic values of moral commitment and normative behavior are permanently stable as long as there is a legal commitment that the UAE Constitution affirms that Islam is the official religion of the state.⁽¹¹⁾ Moral and social values depend on two main sources: the Islamic faith and inherited Arab customs and traditions. Islamic values are fundamental and constant and do not change no matter how long they pass. The Arab values are variable and depend on the degree of circulation. The degree of change in values is linked to the transition from a traditional, conservative society to an open, multicultural society.

The Islamic religion encourages the values of cohesion and interdependence between people. This cohesion constitutes a united societal force among the Emirati people. Religious ties represent a sacred value that links members of one society and has societal dimensions that are the strengths of the social system. The strengths of Emirati values lie in the deep ideological faith and traditional inheritance, and these intrinsic capabilities support moral and social values and standards. However, traditional values are variable but mostly stable in some aspects as they are connected to fixed Islamic values. The political and administrative authorities also promote the authenticity of Arab values and adherence to basic traditions. The inherited customs, traditions, standards, and behavioral methods have continued in the traditional Emirati society for a long time without change. However, the social change that Emirati society is going through has affected, in one way or another, traditional values and standards.

However, the Emirati culture stems from two important parts: the Islamic faith and the Arab heritage, but is still characterized by a high degree of stability! Society consistently practices the religious values and behavior associated with the Islamic faith. Supposedly, this system will be maintained throughout the next fifty years. As for the values and standards that have been formed over time and have become part of the general culture and are passed down through generations, they are changing values. There is a fixed culture and a changing culture. A changing culture does not have a degree of stability that can be measured in the future. It is inevitably changing, but gradually. Changing cultural values are subject to the norm of chronological development, and the Emirati value system changes from time to time due to external cultural contact.

Despite many different nationalities and religions, Emirati society still has its religious and moral values. The UAE exerts intensive efforts to preserve Arab values, standards, customs, and traditions. The traditional Emirati society was founded on customs associated with the Islamic faith and tribal unity. The currently used system of ethics and standards determines public goals, shapes the social system, and still depends as before on absolute certainty.

Future value system:

The Emirati value system is subject to constant change, there is an automatic acculturation between inherited and new elements. Through this integration, a perspective of future values is formed. This perspective cannot be adapted and some undesirable values cannot be excluded. The integration was not subject to natural conditions, but rather a semi-forced acculturation process.⁽¹²⁾ There are different universal values in Emirati society, and they are by nature heterogeneous and may be contradictory to society's trends as acquired values. The values and social standards are a material, behavioral, and moral reflection of the interaction of the elements that make up the authentic culture. Each person has a value agenda, which is subject to the aspects of reality. By monitoring these determinants, stability in the original values can be measured at the extent of influence of the imported values and how to preserve and transmit such values to future generations. The UAE's inherited original values have sufficient power to influence foreign cultures through laws to keep basic traditions, as the immaterial aspect of culture can determine its future course.

Emile Durkheim⁽¹³⁾ believes that the immaterial aspect changes slowly, while the material aspect changes rapidly. The system of immaterial values constitutes the most basic pillars of the national heritage; therefore, it does not change absolutely, but rather some of its components

are transformed gradually. The Emirati society's social-material and immaterial change resulted from the rapid transition from one specific situation to another. This type of change conditionally shifted the basic values and traditions. Despite the change in Emirati society since the seventies, traditional values still represent a reference for most social practices. The positive thing about the change is that the immaterial aspect of modern Emirati society has not changed at all. Rather, there are parts of the inherited components that remain constant. Although traditional values are rooted in the mentality of the Emirati person, the continuity of the values depends on the UAE people's future consensus.

Some UAE standards have been changed, and this is normal. There cannot be fixed standards throughout history. The social profound and rapid transformation naturally happens in all cultures. However, the UAE society has created balanced standards aside from the confused functional structure.

Thus, the fortified standards and fixed societal values, which have collective recognition, were prepared to accommodate and represent the developments. The new culture produced modern value models that interact with these multiple distinctive elements. The inherited and new values are integrated, when the local value system, the degree of influence, interaction, and acceptance of other imported values are explained.

The future national value system requires value integration, which is achieved in UAE society. Islamic religion-based values realize this type of integration. This requires platforms to formulate standards that take into account all processes. The policies that must be activated should be short- and long-term future plans. The codified standard system can be implemented according to a long-term plan. These ethical standards must reach all segments of society, at every time and place, over the next fifty years. The national family must carry out these tasks because moral education is essential for achieving the targeted direction of the UAE Vision 2021-2071. The nuclear and extended Emirati family must instill values in the children and represent these values through socialization. The questions: What will the features of the Emirati family look like in the future? What is its value system? What will the relationships between its members look like?

The Emiratis have many distinctive values, standards, qualities, and morals that are inherited across generations. For these values to continue, new value standards must be created to conform to the direction of the UAE Vision 2021-2071. The readiness of society depends on the extent to which these values are preserved and extended to the next fifty years. However,

this legacy will change because Emirati society has a natural transformation. Society's values are fixed and variable. Fixed values do not pose any challenge, but variables may play a negative role if they are not contained. The questions are: what kind of change is desired to be brought to invest certain values that keep to the direction of the state's plan?

The UAE's targeted direction is to preserve the system of values for the next fifty years and beyond. Preserving values in a changing society requires concerted efforts: starting with the family, passing through society, and ending with the official and non-official state agencies. The focus must be on socialization and education.

As mentioned earlier, the immaterial aspect represents the basic system of values on which all other superstructures of socialization, education, and social construction are based. All policies that are supposed to be implemented by the concerned authorities must take into account these facts derived from the UAE Vision 2021 2071, define the values required to be invested, and ask several questions:

Are values supposed to be subject to society-adopted visions?

Should values be derived from historical, religious, and cultural roots?

Should values be aligned with a universal value approach?

Section 2: Basic Traditions

1. The basic rules of tribal values
2. Tolerance as an exchange value
3. Genealogy as a basic tradition

1. The basic rules of tribal values:

Emirati society is authentic, as its roots extend deep into history. In addition, it is based on the patriarchal tribal system⁽¹⁴⁾ from which social values and standards are derived. Dr. Hisham Sharabi believes that the patriarchal system represents the basic rule of tribal values in traditional Arab societies and most primary societies. The patriarchal system represents a social pillar in traditional Emirati society as a social, economic, and political unit. This system in traditional Emirati society⁽¹⁵⁾ provides security of living for its members and achieves self-sufficiency at the tribal level. This system spread in coastal and rural areas and desert nomadic communities.

Although the patriarchal-tribal system is a large-scale social product, the hosting environment is the closed groups that are called “non-state societies”.⁽¹⁶⁾ However, the tribal system established a cohesive social framework and a strong political structure based on the tribe or tribal alliance.

The tribal-political formation preserved the consultation system as an Islamic value built on democratic foundations, which is (people rule), as everyone who represents the tribe participates in decision-making. The tribal system preserved the authentic traditional values to a large extent. This system began to diminish after oil production and the formation of an integrated state (state of law). The Federal National Council was established, which combines the values of consultation and democracy.

Sociologists believe that the patriarchal system is manifested in the social, legal, political, religious, and economic organization of different cultures. Most current societies are patriarchal in social and behavioral standards forming the individual value system. The patriarchal system in traditional Emirati society formed a strong basis for tribal groupings linked to practices including the division of work and cooperation between individuals, extended families, clans, and tribes. Work is divided based on differences and abilities between women and men, adults and children. The traditional original Emirati patriarchal values are work, sincerity, cooperation, patience, obedience, generosity, and sacrifice.

The patriarchal tribal system is a joint work among its members at all levels. The patriarchal tribal system consists of the primary family, the extended family, the tribe, and the tribal alliances. The system develops socially, economically, and politically from an extended family to a tribal system linked to a single ancestor resulting in sequentially preserved lineages. In this system, the work is shared among the extended family members who share and inherit properties. However, as society transits to an integrated institutional state system, the tribal system disintegrates. The system may or may not preserve some of the lineages. The patriarchal tribal system in Emirati society is still intact representing the backbone of inherited traditional historical values.

There is a close relationship between the patriarchal system and lineages. The patriarchal system is based on clan lineage, the parental lineage extending back to the first grandfather, which develops into an integrated tribal political system. This system maintains father lineage and establishes a closed social and economic system. The tribal system intermarries only with people directly linked to the first ancestor so that lineages do not mix and lose their origin.

2. Genealogy as a basic tradition:

Genealogy is one of the basic traditions of Emirati society, and this matter is still certain. The first roots of the Emiratis go back to the Arab patriarchal tribal lineages. The connection between lineages and the patriarchal system focuses on preserving lineage as an existential value. This strengthens the bonds between the extended family, clans, and tribes. In desert areas, lineages represent a social value. They spread during pre-Islamic times and Islam. Lineages between nomadic tribes are an existential value, as preservation of lineage means the continuation of life. Lineage is a source of pride and power at the same time. Tribesmen are proud of their tribal affiliation and strictly defend their identity, and this affiliation imposes a moral obligation.

The Messenger, peace and blessings be upon him, urged knowledge of distant relatives to strengthen kinship relations, and he urged learning, monitoring, and documenting lineages. Lineages have become an Islamic religious necessity, due to the prohibition of mixing lineages and the promotion of lineage-based stable relationships at the religious, moral, social, economic, and political dimensions. The prophet companions enhanced historical documentation of lineages, especially the lineage of “the family of the Prophet and the Noble Companions” and the people of the conquests. In the first era of Islam, genealogies were associated with the history of Islamic conquests to document good deeds. The lineages are also associated with some of the Quraish tribes, and our prophet Muhammad, peace and blessings be upon him, sought help from some of them to spread the principles of Islam, due to their favor and social status. In the eras of successive Islamic empires, Islam urged tribal alliances and gave them their social status. Muslims used this rule from the scientific aspect and refrained from boasting about their ethnic lineage. Positive tribal fanaticism spread in Emirati society, which resulted in two main alliances: the Bani Yas Alliance and the Al-Qawasim Alliance.

Ibn Khaldun ⁽¹⁷⁾ indicates that preserving the lineage means preserving the fatherhood! How does this happen? As is known among the early Arabs and in Islamic eras, the lineage of children goes back to fatherhood.

Even Arabs intermingle with others; the Arab lineage remains the first one. Therefore, the people of Spain preserved their clan lineages, even if they mixed with others. In the tribal system, and even in the countryside, lineages are preserved by knowledge and primary relationships. The Arabs of the Peninsula, who lived in the cities, preserved their lineages and clans in keeping the name of the tribe, clan, or family. The lineage's relationship was broken in Spain, and the

names and the lineages were lost. Therefore, preserving lineages requires maintaining a closed system that keeps the sequence of tribal names and titles.

Sociology indicates that the tribal system is the basic rule that preserves lineages. The tribe, as a social system, is a self-contained unit that forms a broad lineage base and becomes a patrilineal unit, as the father's lineage does not change, and the relationship is a means of mutual support. Desert tribes support each other. They seek protection and economic and social solidarity. Therefore, semi-integrative tribal alliances are usually formed to preserve lineages. Intermarriage with other tribes does not take the tribe or clan out of its hierarchical context, as the overlap is for clans and relatives. These are symbols of the desert. This system constitutes a closed social circle linked to a fully-fledged patrilineal lineage.

Whenever tribes move from a state of isolation to a settled life, the parental connections change. Stability creates a feeling of security, the security of the population is the responsibility of the civil state, and this is what happened in the UAE. There is no crucial need for lineage except to preserve the patrilineal tribal sequence. Preserving lineages in open societies is not an easy matter. The mixing of Arab lineages is not new. During the time of the Umayyad, Abbasid, and Ottoman Caliphates, many people mixed with the Arabs. When the Islamic civilization extended outside the Arabian Peninsula, the Muslims came to represent the Arabs. The Arab lineages mixed with other Islamic nations. These nations have their characteristics, but Islam and the Arabic language unite them all.

Genealogy helps modern genetic researchers determine human genetic diversity and draw a detailed map of how humans are related to each other globally. Genealogy explains how we inherited parts of our genome from our unknown ancestors.

The Arab scientist Abd al-Rahman Ibn Khaldun linked lineage to time and place, and to tribal kinship, which represents the fortified shield of protection, interconnectedness, and mutual support in the absence of institutions. Therefore, lineages go back to the human need for support in times of adversity. When the need is no longer required, the bond of tribalism and the intensity of adherence to lineage diminishes. The patriarchal-tribal system represents the protective fence of lineage, and it is no longer closed. When tribalism and civilization overlap, it is difficult to maintain the patriarchal system, but the tribe remains to preserve the social values, standards, and lineages.

3. Tolerance as an exchange value:

Tolerance and pluralism are positive foundations for effective societal cohesion to overcome social challenges. Ibn Khaldun linked societal cohesion with acceptance of pluralism long before others in the study of transformed societies. He considered that a civil contract based on the social contract between members of one society on the principle of equality spreads cohesion and integration. The UAE society is characterized by tolerance, acceptance of others, and coexistence. The UAE Charter of Tolerance links more than 200 nationalities residing in the UAE. This is due to its Islamic faith, Arab values, and tribal roots. These values are shared with human cultures based on moral rules, such as tolerance, honesty, cooperation, altruism, truth, and justice. These narratives can be traced back to the sixth and seventh centuries B.C., when early philosophers, such as Homer and Aristotle,⁽¹⁸⁾ inquired about the means and goals of human nature that would bring people closer to cooperation. Based on the social, political, and economic transformations, they proposed that life values are courage, civil laws, hard work, honesty, nobility, reason, tolerance, and participation in public affairs. From this standpoint, these are the most significant characteristics of tolerance in Emirates society.

The UAE is naturally characterized by tolerance and coexistence, as required by a changing multinational society. It is necessary to find an implicit contractual form between the UAE citizens and residents that would keep security and tolerance. The late Sheikh Khalifa bin Zayed Al Nahyan, may his soul rest in peace, declared 2019 the Year of Tolerance in the UAE. This aims to highlight the UAE as a global capital of tolerance. At that time, the focus was on five main themes of the Year of Tolerance:⁽¹⁹⁾

1. Deepening the values of tolerance and openness to cultures, nations, and values among new generations.
2. Consolidating the UAE's position as a global capital of tolerance through major initiatives and projects, including research contributions and social studies in the dialogue of civilizations.
3. Promoting cultural tolerance through different societal and cultural initiatives.
4. Introducing policies aimed at promoting the values of cultural, religious, and social tolerance.
5. Promoting tolerance and acceptance of others through media initiatives.

The state also established the first ministry in the Arab world concerned with tolerance, coexistence, and acceptance of others. The idea of tolerance and acceptance is the state's future path. The UAE is one of the first countries to spread tolerance among fixed values. To promote tolerance, it must be an exchange value for the UAE residents. The UAE is unique, as it displays a "tolerant" systematic model and creates a prominent position of a comprehensive value system that accommodates the human product. High human values are connected with high principles, human values and morals, dialogue of religions, and rejection of conflict. There are opportunities to advance humanity, and this idea is better than globalization, which seeks to dominate small nations. The (original and imported value system⁽²⁰⁾) becomes part of the general value system. In this regard, it is difficult to overcome this system, which is originally based on the principle of (coexistence and positive interaction) until a new factor emerges calling for change. Then society undergoes a process of renewal and re-definition of the system of values that govern and direct its structure, and determine its characteristics in the reciprocal tolerance system.

The state established the ideology of tolerance aiming for peace, which is the end. The principle of acceptance and providing opportunities for others is the means. The state-adopted tolerance is the basic rule for global peace and is the gateway to openness to others, acceptance, and understanding of differences. The UAE tolerance measures are the acceptance and respect of the UAE residents who differ from the locals in values, customs, standards, religion, and language. These measures are the highest values of tolerance that the UAE uses in the era of globalization. The UAE has opened the doors to possible economic development and preserved special social values and interaction. The UAE uses common international standards to transmit Emirati social values, as economic and social globalization is widespread in Emirati society. Globalization calls for acceptance and can shape values in a widely desirable way. From the Emirati perspective, the UAE respects other cultures and tolerance is mutual respect, understanding, and cooperation.

Section 3: Focuses on social formation

1. Social justice
 2. Social solidarity and collective feeling
 3. Fixed and changing social standards
- 1. Social justice:**

Social justice is an Islamic principle and a basic condition for human rights. Islam is a

religion of peace that emphasizes legal equality and promotes the idea of universal fraternity to establish a peaceful society. The principles of social justice are widespread in societies with a primary cooperative organization associated with patriarchal systems and work.⁽²¹⁾ The hard life of nomadic societies imposes a homogeneous standard of living. There are no social classes. In such circumstances, justice⁽²²⁾ is a form of equality between all individuals without discrimination. Traditional Emirati social justice is the fair and equitable distribution of property, the implementation of public policy, and the commitment to fairness and equality in shaping social policies. Justice is positive neutrality and fairness for all people.

Travel forced the desert residents to create a cohesive system that does not allow exploitation, as the social environment does not allow them to do so. Social justice was widespread in Emirati society, which was the patriarchal tribal justice that prevailed among the Bedouin groups during their travel in the desert areas.

Social justice addresses systemic inequalities to ensure everyone has the same opportunities and results. Justice recognizes and attempts to eliminate the existence of inequality. Fairness may mean justice and comprehensive equality in the totality of rights and responsibilities for both sexes. Fairness allows for possible differences within the overall balance and equality. The social policy can include social justice and a variety of public contexts. The UAE achieves justice for all, implements external projects that affect specific communities, and creates a better life for all. An example is the project of the UAE Charitable Works Authority abroad.⁽²³⁾

The three main social justice issues include environmental justice, community engagement, and empowerment. The UAE applies environmental justice and the evidence for this is (Cop28). Community engagement is applied in the UAE on a large scale and in all fields. The UAE is also one of the first countries to implement empowerment at all levels. An example is the empowerment of Emirati women, at the level of equality in the Federal National Council representing 50%. The question is what is the difference between social justice and social equality? Justice refers to fairness, and social justice allocates the necessary resources and opportunities to every person to achieve an equal result. Equality refers to equal opportunities and resources and makes everyone at the same level.

2. Social solidarity and collective feeling:

A: Social solidarity

Social solidarity is an Islamic value and Emirati social tradition. The Patriarchal tribal

system was founded on cooperation and collaboration. It spreads through collective feeling among interconnected groups such as clans and tribes, linked to the patriarchal tribal system. Despite the change in some social values and standards, this characteristic persists in Emirati society. In the literature of the French sociologist, Emile Durkheim,⁽²⁴⁾ there are two types of social solidarity: “mechanical” solidarity and organic solidarity. Simple “primitive” societies have “mechanical” social solidarity relations. The complex societies, which are industrial societies, have organic social solidarity. The quality of solidarity is based on the degree of social cohesion, whether mechanical or organic, and through demographic (population) characteristics, the applicable standards, and the collective conscience.

The mechanical system intensified social solidarity, and social cohesion between the residents. It is based on kinship, mutual feelings, and direct relations. This applies to the UAE’s traditional society, which has extended to present times. Organic solidarity is widespread in large cities whose residents have no direct kinship relations and collective feelings. Mechanical solidarity usually works in traditional and small-sized societies, such as tribal gatherings and simple societies.

Solidarity usually depends on kinship ties of tribal family networks. In traditional Emirati society, social solidarity is based on two factors: the religious factor and the tribal factor. Mechanical solidarity comes from the cohesion, religious integration, and homogeneity of the tribe members, the collective feeling prevails through blood ties. Support, seeking help, and protection⁽²⁵⁾ are among the most important values of social solidarity inherited in traditional Emirati society.

B: Collective feeling

Collective feeling is a system of shared beliefs and feelings among members of a single society. It constitutes a socially distinctive system. The collective conscience is formed by belief or ideology rooted in the conscience of individuals and groups. There is a mutual connection between the collective conscience and social ideas and beliefs because of the influence of the collective conscience on individuals. Social beliefs are a special system among members of a single society, as the collective conscience has its existence, separate from individuals, and it has strength and independence. It continues across time and unites generations through the moral system values.

Collective feeling is a societal characteristic, and it is the deepest societal value that spreads

among the people of the desert and it is based on tribal unity. In modern Emirati society, the collective feeling has transformed into a social value of solidarity. There are many shared feelings and hopes among the people of the Emirates, which form a shield of protection for the UAE and reinforce the values of loyalty and belonging. The common feelings among members of one people enhance national cohesion at all dimensions. Despite openness to world cultures, social cohesion still prevails in modern Emirati society. These values have merged with many traditional Emirati values, and the separation has become imperceptible. The values of Islamic solidarity, moral standards, and collective feeling have formed a supreme reference for the people of the Emirates and have become among their prominent remarkable characteristics.

3. Fixed and changing social standards:

A. Social standards

Social standards and social norms differ as follows: Social standards are the elements that determine the degree of social values as “axioms.” The common standards among members of society determine the correct behavior of acceptable and recognizable social values and a control standard for violation. Social standards can be informal understandings that govern the behavior of members of society, and they can also be encoded in formal or informal rules and laws. The traditional Emirati social standards are fixed moral standards derived from religious beliefs. These axioms are a dividing line between truth and falsehood. The traditional society adopts the standards of the Arab heritage that extend to the modern Emirati society.

B. Social norms

Social norms are informal understandings that govern the individuals’ behavior approved by society and can be codified into rules and laws. “The norms are what people are accustomed to.” That is, norms take their credibility from consensus among members of society. Social normative influences or social norms are powerful drivers of human behavioral changes. They are well structured and integrated into the major theories that explain human behavior. In modern Emirati society, social institutions consist of multiple standards and shared social beliefs about public behavior, some of which have been transformed into effective and binding laws. They differ from ideas, trends, and values that can be personally kept. The criteria depend on the general context, social group, and historical circumstances. The stability of social standards depends on the strength and speed of social change in Emirati society. From this standpoint, the social values cannot be only documented. Rather, it is also important to monitor the change of values through the movement of society and test the degree of stability.

Section 4: Challenges facing national values:

1. Globalization
2. Challenges facing the Arabic language
3. Social media

1. Globalization:

Globalization describes the global system that brings together nations and countries in one unit. Globalization is an organized strategy based on a capitalist economic ideology.⁽²⁶⁾ It aims to unify the global political, economic, and social systems. Globalization is a diverse and unified device used to describe the interconnection of world economics, cultures, and nations. This system results from cross-border trade in goods, services, technology, investment flows, people, and information. Global powers established economic partnerships across borders and continents to facilitate global movements. The term spread widely after the Cold War⁽²⁷⁾ in the early 1990s, as this strategy shaped new economic paths.

The UAE has entered globalization since exporting oil in the 1960s. The UAE has opened widely to the world, especially concerning the market economy, and supply and demand price indexes. The country depends on oil production and foreign investments and is affected by external factors to the extent of its openness to the global economy. Economic openness led society to social and cultural openness, consumption, and behavioral values and habits. Economic globalization has cultural challenges, as the global trends affect the UAE society. Economic openness contributes to the country's progress and strengthens its relations with other countries as an oil-exporting country and a global economic partner. External relations normally affect values, customs, traditions, and social standards. However, the UAE leadership mitigates the external impact on the traditions to protect Emirati values from all negative influences. The modern Emirati society culture still has the authentic characteristics of the past.

2. Challenges facing the Arabic language:

Language is a unique social and moral value, identity, and privacy. It is a communication system consisting of rules and vocabulary⁽²⁸⁾. Language is the medium by which humans convey meanings, values, and social norms. It has three forms including spoken or written. Language is one of the most important basic components that express beliefs, contain social values, define them verbally, and symbolize them morally. The Arabic language has cultural and historical diversity, as it is the language of the great revelation, "the Holy Qur'an." It is stated in its verses: "These are the verses of the eloquent Book". (1) Indeed, We have revealed an Arabic Qur'an, so

that you may understand. (2) ⁽²⁹⁾ The Arabic language has the unique characteristics of heavenly languages . It can produce and change, and it is acquired through education and learning.

The Arabic language is one of the intellectual components through which the discourse is formulated and authentic behaviors and rules are formed. The Arabic language is the dividing line between the original and non-original. The Arabic language is the medium in which values, standards of behavior, and a system of ethics are established. Values and standards are behavioral rules that live through daily practice, and language broadly accommodates human communication in the process of daily interaction. The Arabic language, which has a rich vocabulary and religious and historical specificity, represents an encyclopedia of values. Through language, ideas, morals, values, and standards are crystallized. Humankind uses language to express achievement, history, and heritage.

For the value system integration to be achieved, traditions must be transmitted from one generation to another through targeted educational means and the national language. Through linguistic education, young people absorb and translate the values and morals into good behaviors. Language is an educational behavioral act, and education ⁽³⁰⁾ has active roles in the processes of education, guidance, and redirection. Through verbal interaction, educational trends in formulating behavior are formed, and the vital role of language in shaping and modifying trends is enhanced. School is a significant part of the process of formulating values and it is a part of an integrated executive social, and political system. Therefore, educational policies do not deviate from the official authority, and educational institutions must maintain the desired trends. Educational curricula are constantly prepared and revised according to the relevant authority-adopted intended vision. The goal is to achieve the targeted direction, which is the Emirati values. Formulating standard values that keep up with the data of the next fifty years is the duty of the responsible authorities. Despite the use of other foreign languages, Arabic is the most used language in official audio, visual, and written communications in Emirati society.

3. Social media:

Throughout history and in all world cultures, social values identify overlapping paths within traditional social channels of communication. Media is often related to the social value system and connected with the general culture. It is a standard criterion for making the required balance between local and international values. However, the traditional media has changed and has been replaced by social media. Nevertheless, modern Emirati media promote local values and establish social platforms that keep customs and traditions. There are also

benefits to such media, as it allows communication between members of society, and increases opportunities for knowledge, learning, and education. Social media can be a valuable source of news, information, social issues, and the ability to share broadly and effectively display creativity.

Social media plays a vital role in accepting external values, standards, customs, and traditions. These global ethical components must be governed by social conditions consistent with current perceptions and future challenges. The local values depend on daily circulation, as society chooses the ones that meet its needs. Social standards are a product of the human being's living reality and are connected in form and content and disconnected in application. These conditions apply to local channels and not to global social media broadcasts! The official institutions can overcome challenges and formulate effective future media policies. The current generations live in a society open to many cultures and face many challenges. Official authorities and families must create a system that limits the dominance of social media. The state has developed an integrated system to preserve Emirati values from external media influences.

Despite all the cultural pressures of social media, the value system will not change, no matter how great the external pressures are. The authentic and stable Emirati values stem from spiritual, intellectual, and moral origins. The values will not be affected as long as they are well-treated and maintained. Therefore, it is important to carry the past, not all of the past, into the future; Carrying the past into the present is a spontaneous task, but carrying the present into the future is a programmed task!

Conclusion

What are the enablers to achieve the targeted direction of the UAE Vision 2021-2071? The enabler that will achieve sustainable values, standards, and ethics is the constant religious-Islamic faith and the authentic social Emirati heritage. The targeted approach is to preserve Emirati values for the next fifty years. The enablers are contained in the constants. Preparing generations is the real investment in human capital that will carry the past in parallel with the present. The UAE should develop a strategic plan to enable future generations to keep Emirati values. Emirati values from the Islamic religion and Arab heritage play the role of a barrier against negative influences. The Emirati citizens interact with the residents of all human religious values. Therefore, Emirati values and standards should widely interact but not change except to the extent permitted. The UAE leadership harnesses all energies to preserve Emirati values, standards, and morals.

Footnotes

- (1) Refer: UAE Centennial: -/ and-visions/innovation-and-plans-awards/strategies-and-initiatives-uaeestrategies-the-ae/about-<https://u.ae/arfuture-shaping/uae-centennial-2071>
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- (9) See references: Chung, A., & Rimal, R. N. (2016). Social norms: A review. Review of Communication 28-Research, 4, 1
- (10) See reference: Al-Sanaa Blog: Federal Authority for Government Human Resources - emirati-sanaa-in-a-special-session/2022/3/as-part-of-the-authoritys-activities-<https://www.fahr.gov.ae/Portal/ar/news/24>
- (11) Refer the Constitution of the United Arab Emirates
- (12) Acculturation is the mixing of cultures present in Emirati society between a number of nationalities and its impact on society
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- (25) Al-Fazaa is a material and moral value of cooperation among members of society during weddings and sorrows. It is still widespread among the tribe members. Shufa: This is the financial and moral support provided by tribe members to the tribe's sheikh or ruler. This is to manage the affairs of the tribe in times of hardship. Dakhla: It is a type of protection value widespread in Bedouin society in the desert. Someone enters the tribe seeking protection.
- (26) Capitalism is an economic system based on private ownership of the means of production and the creation of goods and services for profit. Key characteristics of capitalism include private property, capital accumulation, wage labor, and competitive markets (Refer: Wikipedia).

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Chapter 4

Human Development and Future Aspiration

Prof. Abdulla Abdulrahman Al Khatib

What is human development?

All societies aim to develop human beings,⁽¹⁾ because creating and investing in human beings enhances the individual's belonging to the homeland, and maintains the cohesion of society, achieving sustainable development and establishing civilization.⁽²⁾ Human development means preparing and qualifying the individual since childhood including his/her physical, material, and spiritual needs, in addition to thought, belief, and ethics.⁽³⁾

Human beings are “a collection of matter, ideas, ideals and values”,⁽⁴⁾ and society cannot be reformed except by the reform of this human. The approaches and methods of development differ according to the outlook of these societies on life and its purpose.⁽⁵⁾ The Emirati people derive values and morals from Islamic law, and authentic Arab customs and traditions.

Human development is part of general development⁽⁶⁾ because development means improving human beings in material and moral life, knowledge, thinking, food, work, treatment, and all affairs⁽⁷⁾ because the more human beings grow and advance, the more he/she contributes to developing his/her society.⁽⁸⁾

The UAE leadership and human development

The UAE leadership attaches great importance to developing human beings. There is no evidence clearer than the statement of the founding father, Sheikh Zayed - may his soul rest in peace -: “Developing human beings is a national priority that precedes building factories and facilities. Without a good human being, prosperity and goodness cannot be achieved. The UAE leadership proudly wishes to develop a generation that will be able to bear the burden of responsibility in the future.”⁽⁹⁾

Following his example, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President, Prime Minister, and Ruler of Dubai, stated: “The making of leaders is a secret that can only be understood by men who have overcome the inflated ego and self, and understood that “The greatest achievement they make is developing people, not stones.”⁽¹⁰⁾ The UAE leadership vision seeks to develop people and aspires to go beyond and develop a human leader. Leadership is wisdom, personal strength, and a constant aspiration for great things.⁽¹¹⁾ The UAE organized leadership programs and courses to prepare Emirati people, the most important of which is the Government Leadership Program of the Prime Minister’s Office, inspired by His Highness Sheikh Mohammed bin Rashid: “We are looking for leaders who move mountains, lead change, and create the future. Their determination is high, and their ambitions embrace

the stars.”⁽¹²⁾ In line with this trend, the UAE has adopted the UAE Model for Government Leadership.

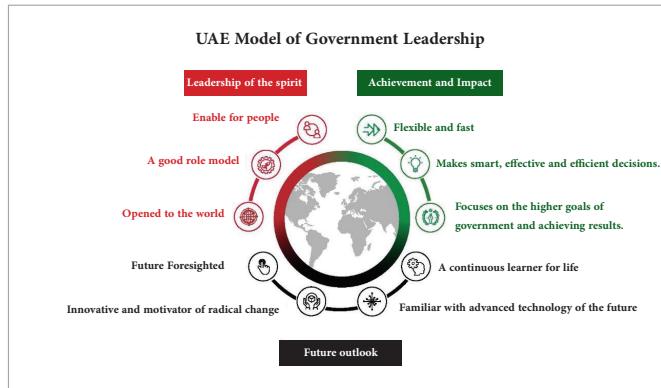


Figure 1: The UAE Government Leaders

This model includes three dimensions: leadership spirit, future outlook, and accomplishment and influence

The leadership spirit of the Emirati leader includes the following qualities:⁽¹³⁾

1. Enabler: He/she inspires, encourages, and motivates others, develops human energy and talent, empowers and builds leaders, transfers skills, effectively uses his/her abilities, and has emotional intelligence.
2. A good role model: He/she has morals, values, integrity, modesty, and respect, and is optimistic about the future and passionate. He/she is persistent, embraces and spreads the concepts of happiness and positivity, and seeks to make tangible contributions and reflect the good reputation of the state.
3. Open to the world: He/she enjoys peace, tolerance, and coexistence. He/she aspires to communicate with the world and benefit from different experiences. He/she has a network of relationships and is aware of international culture.

The future outlook includes the following qualities:

1. Foresight: He/she is familiar with global trends, imagines the future, is far-sighted, and works to anticipate and analyze opportunities and challenges early, and develop scenarios and proactive plans.

2. Innovator and motivator for radical change: He/she adopts creative thinking, stimulates entrepreneurship thought, and understands the process of radical change among individuals and in the institutional context. He/she has a sense of taking risks, and believes that there is no such word as “impossible.”
3. Knowledge of advanced future technology: such as the Fourth Industrial Revolution, artificial intelligence and its impact, and ways to benefit from and invest in creating the future and human happiness.
4. Continuous and lifelong learner: He/she has a passion for learning, and seeks self-development to diversify and constantly update skills; To keep pace with future requirements and changes, and he/she has a love of knowing, researching, and exploring new things.

In terms of achievement and influence, he/she has the following qualities:

1. Flexible and fast: He/she is flexible and quick, creates an environment that promotes change, speeds up achievement, effectively uses available resources, and has self-confidence in different situations.
2. Smart and effective decisions: He/she adopts a way of thinking that enables him/her to make smart, practical, effective, and impactful decisions, and he/she has awareness, courage, and skill in taking the right measures.
3. Focusing on the higher goals and objectives of the government and achieving results: He/she has in-depth knowledge of government directives, disseminates the concept of the higher goals and objectives of the government, achieves common national goals, and specific results, and creates added value.

In the footsteps of the founding father, Sheikh Zayed bin Sultan Al Nahyan

The UAE leadership is still following the footsteps of the founding father, Sheikh Zayed bin Sultan - may his soul rest in peace. The human being is the true wealth of the country⁽¹⁴⁾ and there is no benefit of buildings if not matched by human development, and he said, “The greatest investment is in creating educated and intellectual generations”.⁽¹⁵⁾

In this context, Sheikh Mohammed bin Rashid affirms the commitment of the UAE leadership and all officials to the values of the founding father, Sheikh Zayed:⁽¹⁶⁾

The great leaders established the UAE. The UAE achieved miracles at the hands of those leaders, and one of the most important secrets of our success will remain the value that must continue in all officials in this country. The miracle is the value of self-denial for the benefit of

the country. The UAE makes great efforts to consolidate the union's values, the values of Zayed and Rashid. In the Emirates, there is no person greater than the union, no dream greater than the union, and no ambitions except for the benefit of the union.

Year of Zayed 2018

The UAE leadership believes in the great role that Sheikh Zayed played for this nation, Sheikh Khalifa bin Zayed Al Nahyan, the head of state at the time, announced that the year 2018, being the centenary of Sheikh Zayed, will be the "Year of Zayed". It is a national occasion to celebrate his achievements and honor his history. Sheikh Mohammed bin Rashid said: "We learned in schools and colleges, but I did not find a school or university bigger than Zayed".⁽¹⁷⁾

This year aimed to achieve several goals:⁽¹⁸⁾

1. Highlighting the role of the late Sheikh Zayed in establishing the United Arab Emirates, and consolidating the foundations of its modern progress at the local, regional, and global levels.
2. Appreciating his principles and values which have represented the solid foundation upon which the United Arab Emirates stands, and the people's love and loyalty for him.⁽¹⁹⁾
3. Commemorating Sheikh Zayed, personal principles and values globally, as an example of one of the greatest leadership figures in the world and one of the most inspiring in his patience, wisdom, and vision.
4. Enhancing the status of the late Sheikh Zayed as a symbol of patriotism and love of the homeland.
5. Marking the legacy of Sheikh Zayed through future projects and initiatives aligning with his vision and values.

The UAE President issued a decree to form the Supreme National Committee for the Year of Zayed⁽²⁰⁾, to follow up on the activities and the strategic initiatives that will be held in the UAE and at the international level.



Figure 2: Year of Zayed Logo

In the Year of Zayed, the UAE has made many achievements at all levels. Women had 50% representation in the Federal National Council. The UAE adopted a national policy to support the national family and senior citizens. The UAE launched the KhalifaSat satellite. The UAE's passport is the most powerful in the world.⁽²¹⁾

The legacy of the ancestors

The United Arab Emirates celebrates National Day every year on December 2. In 2019, under the patronage of the President, Sheikh Khalifa bin Zayed Al Nahyan - may his soul rest in peace - the official celebration of the 48th National Day was held at Zayed Sports City Stadium in the capital, Abu Dhabi, under the slogan "The Legacy of the Ancestors". Twenty thousand exhibitors shed light on the immortal legacy of the ancestors and the noble values rooted in the authentic Emirati identity, through stories from the ancestors' legacy narrated under the moonlight.



Figure 3: Official celebration of the 48th National Day

The most important lessons:

1. The story of the poet Aousha bint Khalifa Al Suwaidi (AKA Girl of the Arabs), who excelled in poetry and captivated hearts with her eloquence and the meanings of wisdom, love, longing, and adherence to the land and religion.
2. The story of the diving trips that the son of the Emirates was undertaking, and the meanings of trust in God, seeking sustenance in the depths of the seas, patience to bear risks, and hope for a triumphant return to dry land.
3. The story of Sheikh Zayed bin Khalifa Al Nahyan (Zayed the Great), his response to the aggressors of the homeland, and the meanings of courage, pride, and forgiveness

This celebration embodied the leadership's belief in the importance of the development of the human being. Whoever does not know the past, he/ she has no future. It revived in the hearts of the youth the vigor of the founding fathers and their legacy so that they may continue with their noble and eternal values and pass them on to future generations.⁽²²⁾

Giving of Sheikh Khalifa bin Zayed Al Nahyan

Sheikh Khalifa bin Zayed Al Nahyan - may his soul rest in peace- achieved economic and social stability and provided a decent life for citizens. He is a descendant of the late philanthropist Sheikh Zayed bin Sultan, and His Highness said: "When people brag about their achievements, we are proud that we are the sons of Zayed Al-Khair, and when people talk about history, we talk about a history of goodness that began with the establishment of our state." ⁽²³⁾.

When he was Crown Prince, Sheikh Khalifa bin Zayed supervised and supported the Department of Social Services and Commercial Buildings. The Department is responsible for providing suitable housing and generous no-interest loans to citizens to establish return-generating commercial buildings. As President of the State, he established the Khalifa Bin Zayed Al Nahyan Humanitarian Foundation in 2007 to provide pioneering initiatives in the service of humanity, ⁽²⁴⁾ in addition to the Khalifa Fund ⁽²⁵⁾ and the Defaulted Debts Settlement Fund, ⁽²⁶⁾ and other charitable initiatives.

Year of Giving 2017

In 2017, the President, Sheikh Khalifa bin Zayed Al Nahyan - may his soul rest in peace - announced "The Year of Giving", to promote the culture of giving, volunteering, and serving the nation. On this occasion, His Highness Sheikh Mohammed bin Rashid Al Maktoum delivered an immortal message to the people of the Emirates. "What Do We Want from the Year of Giving," the least that can be said to describe it is a golden message. It explains what is hoped from the people of the Emirates during this year, and what is meant by goodness: "My definition of goodness, through my humble experience, is not only in donating, giving, or generosity." True goodness is in making a difference, a difference in the life of a person, a society, or a nation. This the goodness that I learned from Zayed. It is not difficult to make a difference. Goodness is easy. To feed a bird is goodness, to smile to your neighbor is goodness. To exceed your job expectations is goodness. Being responsible, making people happy, and being kind when applying laws is goodness." ⁽²⁷⁾



Figure 4: Year of Giving Logo

The Year of Giving initiatives mainly targeted the private sector as an essential partner in the development process.⁽²⁸⁾ Three themes were identified for the Year of Giving: (29)

1. Social responsibility:

Consolidating social responsibility in private sector institutions and promoting the national development process

2. Volunteering:

Consolidating the spirit of volunteerism and programs in all social segments, providing social services, and enhancing competencies in all fields

3. National service:

Consolidating national service in new generations is one of the most important qualities of the Emirati personality, and instilling a culture of the nation voluntarily.

The UAE launched many initiatives during the year of giving. His Highness Sheikh Mohammed bin Rashid Al Maktoum launched the “Emirates Food Bank” initiative on January 4, the day he took office. It is the first food bank in the country, as the bank deals professionally with a surplus of fresh and canned food from hotels, restaurants, and supermarkets under the supervision of the concerned authorities. The government distributes the food inside and outside the country in cooperation with a network of local and international humanitarian and charitable institutions.⁽³⁰⁾

The UAE federal and local authorities implemented about 2,500 national programs.⁽³¹⁾ The cash contributions amounted to AED 1.6 billion, and 2.8 million volunteer hours were spent, and the “National Social Responsibility Index” measures, classifies, and honors companies and private institutions according to their humanitarian and charitable contributions and results.⁽³²⁾ The Emirates Volunteers website (www.volunteers.ae) was launched, to expand the UAE scope of volunteer work and find volunteer opportunities for those who wish to volunteer according to their interests, skills, and experience.⁽³³⁾

Developing a culture of volunteering

Volunteering means any effort made by an individual to achieve benefit for others without obligation and compensation.⁽³⁴⁾ Accordingly, the culture of volunteering means: “a system of values, principles, ethics, standards, symbols and practices that encourages the initiative to do good deeds that pass to others. It is done by averting harm or danger or bringing benefit

and goodness to others, voluntarily and without obligation and financial compensation.”⁽³⁵⁾ Thus, common sense calls on a person to provide goodness and reject evil. Voluntary work is one of the most important sources of goodness, reflects a positive reputation of society, and contributes significantly to its development.⁽³⁶⁾

Volunteer work is linked to the social and political individual upbringing.⁽³⁷⁾ It is part of the culture of the UAE society derived from the teachings of the Islamic religion and its values, customs, and traditions. From a religious standpoint, the Islamic religion urges us to volunteer for the great good and general benefit. It is one of the reasons for drawing closer to God and increasing reward. In this regard, God says: “And let there be from among you a nation who invites to goodness and enjoins what is right and forbids what is wrong”.⁽³⁸⁾ The Messenger also encouraged his companions to give charity: “I have seen a man in Paradise because he cut a tree off the road, used to harm people.”⁽³⁹⁾

From a historical perspective, Emirati society knew volunteerism even before the establishment of the Union, due to it being a tribal society based on solidarity and brotherhood. Due to the scarcity of resources and lack of sources of income, there was an urgent need for members of society to come together and cooperate to confront these harsh conditions. There was the Fazaa system,⁽⁴⁰⁾ the Shufa,⁽⁴¹⁾ the Tiraz,⁽⁴²⁾ the Musafer Khana,⁽⁴³⁾ and others.⁽⁴⁴⁾

The importance of volunteer work and its benefits:

First: Volunteer work contributes to social and economic development through:⁽⁴⁵⁾

1. Reducing the economic and social burden on the state.
2. Achieving integration and solidarity among members of society.
3. Reducing the level of undue leisure among young people.

Second: As for the individual, volunteer work:

1. Gives the feeling of psychological comfort as a result of obtaining the reward
2. Increases happiness and self-esteem and reducing the effects of stress
3. Acquires many knowledge, skills, and experiences in life
4. Helps the soul to love others and self-denial

Types of volunteering:

Volunteering is not limited to a specific aspect; it may be material or moral. Material volunteering may provide money such as financial donations to charitable organizations or to the poor and needy directly. It may be in-kind or physical effort such as providing food or

clothing or establishing projects such as building mosques, schools, hospitals, or roads, digging wells, and planting lands.

On the other hand, moral volunteering is through intellectual effort or allocating time to a specific cause, such as preserving the environment and culture, spreading religious awareness, visiting the sick and the elderly, or visiting schools to spend time with children and read useful stories to them.⁽⁴⁶⁾

Volunteering does not require that it be burdensome or costly, the Messenger, peace and blessings be upon him said: "Avoid hellfire, even with half of a date".⁽⁴⁷⁾ One should not underestimate the value of voluntary work and its impact.

The UAE's efforts in volunteer work

The UAE attaches great importance to volunteer work, and the Ministry of Community Development is responsible for supervising the work of civil society associations and institutions under Federal Law No. 2 of 2008 regarding associations and civil society institutions for public benefit, which numbered 232 associations in 2023.⁽⁴⁸⁾ Many Local institutions and bodies: Emirates Red Crescent Authority⁽⁴⁹⁾ 1983, Zayed Bin Sultan Charitable Foundation 1992,⁽⁵⁰⁾ Emirates Volunteers Association 1996, Al Maktoum Charitable Organization 1997,⁽⁵¹⁾ Emirates Foundation 2005,⁽⁵²⁾ Dubai Cares 2007,⁽⁵³⁾ Noor Dubai 2008,⁽⁵⁴⁾ Mohammed bin Rashid Al Maktoum Global Initiatives 2015,⁽⁵⁵⁾ and Emirates Volunteers 2017.⁽⁵⁶⁾

For foreign and development aid, the UAE provides its assistance to the least developed countries, regardless of the political orientations of the countries, geographical location, race, color, sect, or religion, but rather takes into account first and foremost the humanitarian aspect, which is the needs of Peoples.⁽⁵⁷⁾ Since the foundation of the state in 1971 until 2022, the number of countries that have benefited from the projects and programs provided by UAE donor institutions has reached 178 countries across the world, and the value of the aid has reached AED 323 billion.⁽⁵⁸⁾

Human development and innovation

His Highness Sheikh Mohammed bin Rashid Al Maktoum and innovation

His Highness Sheikh Mohammed bin Rashid Al Maktoum has a unique mentality and an ambitious vision towards his people. He has a vision of leadership in everything and achieving first place.⁽⁶⁰⁾ He believes that the most important elements of excellence in development are

“human beings, then human beings, then human beings”. His Highness repeats it because of his awareness that human beings guarantee the building of countries.⁽⁶¹⁾ He took it upon himself to achieve the well-being of this human being. An unhappy person cannot achieve happiness for others, because who does not have something cannot give it. He always directs officials to serve citizens and residents.⁽⁶²⁾ He was not satisfied with a call to serve them but to the level of making them happy⁽⁶³⁾ and providing service around the clock.⁽⁶⁴⁾

To achieve this goal of leadership and excellence, His Highness took innovation as an approach and took it upon himself to develop government performance. Why not? His grandfather, Sheikh Saeed, and his father, Sheikh Rashid raised him. He witnessed them transforming the city of Dubai from a small port into a dazzling place in the world. The city is attractive to travelers from near and far in search of livelihood, investment, and decent living. His Highness’ visions are inspired by the fact that he considered the Prophet Muhammad, peace and blessings be upon him, as a role model for him, in addition to the experiences he gained from associating with Sheikh Zayed and Sheikh Rashid.⁽⁶⁵⁾

Innovation in government work?

Innovation means creative development,⁽⁶⁶⁾ that is, coming up with a new idea or developing a previous product by implementing it in a new way that achieves benefit. In the government sector, innovation is developing, testing, and implementing innovative ideas that achieve public benefit.⁽⁶⁷⁾

There are multiple ways to innovate in the government sector. Innovation can be in services, processes, policies, or systems. In general, innovation is a method, which requires setting goals and stages, setting a timetable for achieving it, measuring its effectiveness, and allocating the necessary resources for its implementation.⁽⁶⁸⁾

The stages of innovation are: examining opportunities and challenges, presenting new ideas, developing and testing, proving the validity and effectiveness of new ideas, presenting and implementing, promoting and developing innovation and disseminating it on a large scale, and finally changing systems.⁽⁶⁹⁾

Developing government work

His Highness Sheikh Mohammed bin Rashid Al Maktoum believes that developing government work leads to effective services provided to the public, which reflects positively on their well-being. His Highness sees innovation as a way of life. He says: “Innovate or stagnate!

Governments that do not innovate grow old, become old, and fall out of context”,⁽⁷⁰⁾ that is why His Highness designated the first of his ten commandments in government administration to serve the people. He said: “Serve the people. The purpose of government administration is to serve the people. The purpose of government employment is to serve society”.⁽⁷¹⁾

From this standpoint, in 2001, His Highness launched the first e-government in the Middle East,⁽⁷²⁾ aiming for the government to benefit from technological development through the use of computers in government transactions, and to connect its institutions to the Internet, to facilitate the provision of its services to the public.

In 2011, he launched the global star system for rating services.⁽⁷³⁾ It evaluates the performance of government services and complies with international standards. He also launched the Smart Government Initiative in 2013,⁽⁷⁴⁾ so that its services are available to the public wherever they are and around the clock. He defined the features of this government in the following points: fast transactions, strong procedures, quick response to changes, innovative solutions to challenges, facilitating people's lives, and bringing them happiness.

In 2019, His Highness's government issued the second version of the Government Excellence System⁽⁷⁵⁾ (GEM 2.0), which is a journey that His Highness began in 1997 through the Dubai Government Excellence Program.⁽⁷⁶⁾ This system represents a framework for presenting and improving the performance of government agencies in the UAE. The system has three themes: achieving the vision, distinctive value, and enablers. The standards enable government agencies to achieve sustainable performance and a pioneering competitive position.

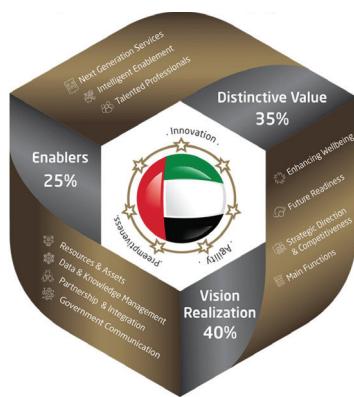


Figure 5: Government Excellence System

To ensure leadership in government work, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President, Prime Minister, and Ruler of Dubai, follow up on the performance of the work of ministries and government agencies, through the KPI reports of those agencies. He also organizes secret shoppers who make surprise visits and write reports on the level of services provided. His Highness also conducts visits to these entities to examine them personally.⁽⁷⁷⁾

Year of Innovation

In 2015, the President of the State, Sheikh Khalifa bin Zayed Al Nahyan - may his soul rest in peace - announced the year of innovation, emphasizing the importance of the concept of innovation in the state's national agenda,⁽⁷⁸⁾ and in line with the state's approach to the continuous development of government work. His Highness Sheikh Mohammed bin Rashid Al Maktoum launched the National Innovation Strategy. It aims to strengthen the UAE's position among the world's innovation leaders. The latest version of this strategy focuses on seven sectors: exploration, future skills, quality of health, living, and life, green power, mobility, and technology.⁽⁷⁹⁾

It introduced many initiatives including the position of Chief Innovation Officer in all government agencies. He also launched the Mohammed bin Rashid Space Center, Mohammed bin Rashid Al Maktoum Global Initiatives Foundation, the Mars probe, and the largest Arab project to encourage reading among school students.⁽⁸⁰⁾

Mohammed bin Rashid Center for Government Innovation:

In 2014, the Mohammed bin Rashid Center for Government Innovation aimed to provide services to all government agencies. It develops an integrated system of modern tools to help these agencies innovate,⁽⁸¹⁾ through three themes: consolidating the culture of innovation, spreading awareness of the culture of government innovation, and enhancing the innovation environment at the state level.⁽⁸²⁾

The Center supervises many innovative initiatives, including the Emirates Innovation Award, the Government Innovation Observatory, the Youth Council for Government Innovation, and the Government Innovation Diploma.

Leadership thought

His Highness Sheikh Mohammed bin Zayed Al Nahyan, "We should promote science and

knowledge to achieve comprehensive development.”

In this section, we will focus on His Highness Sheikh Mohammed bin Zayed's tactics and thoughts in achieving comprehensive development. His Highness has taken work and knowledge as a pillar to achieve this goal through his access to his culture and strategic thinking, then his development of the armed forces, his insightful vision towards education, development, and youth, and finally his aspirations for the future.

His culture and strategic thinking

First, culture is defined as “the combination that includes knowledge, belief, art, literature, law, morals, custom, abilities, and everything acquired from a person’s social and national environment. His/her education and heritage that the grandparents, grandchildren, and society transmit to the individuals from behaviors and characteristics.”⁽⁸³⁾ Strategic thinking is a long-sighted vision of analyzing various data to achieve future goals.⁽⁸⁴⁾

By examining the culture and strategic thinking of His Highness Sheikh Mohammed bin Zayed Al Nahyan, it is clear that he enjoys a high Arab-Islamic culture and insightful strategic thinking, deriving this from his father, Sheikh Zayed bin Sultan Al Nahyan - may his soul rest in peace.

Therefore, His Highness is interested in science and literature and supports poetry competitions and other cultural occasions and events. He also has a pioneering intellectual forum known as the Mohammed bin Zayed Majlis, in which he hosts an elite group of scholars, pioneers, and specialists to discuss various general topics and vital issues and explore prospects.

His military background also influenced his foresight and strategic thinking towards the future of the Emirates and its development. He believes that the basis of the state’s strength is in the union of its emirates, and his famous saying, “The house is united,” has become a slogan and expression of the cohesion of the people of the Emirates: “Do not be affected by the situation as long as the house is united. We are fine under the leadership of His Highness Khalifa bin Zayed Al Nahyan, President of the State, may God protect him. We are fine with the support and help of our brothers and the people of this country.”⁽⁸⁵⁾

He has a vision towards human beings, as he says, “The process of educating human beings means, in the outcome, creating the nation and planting its sails on the shores of a free, prosperous, safe, and stable life.”⁽⁸⁶⁾ His Highness believes in the importance of sustainability. His

Highness develops strategies to preserve the environment and diversify sources, and income. The search for other resources for future generations prepares for a decent life in the post-oil era. “We must balance responsibility between our duty to modernize other sources of energy and protect the environment and provide an appropriate legacy for future generations.”⁽⁸⁷⁾

His Highness also identified three factors for competition with countries of the world:⁽⁸⁸⁾

1. Flexibility and exploitation of resources as much as possible.
2. Investing in education.
3. Leadership with a clear vision and road map.

His Highness Sheikh Mohammed bin Zayed Al Nahyan Development of the Armed Forces (National Shield)

As a military officer, His Highness Sheikh Mohammed bin Zayed Al Nahyan understands the importance of armies in protecting the nation and its gains.⁽⁸⁹⁾ The sophisticated and advanced aspects of our life will not remain stable without a strong defensive army. Therefore, he has developed the armed forces, through training, arming, purchasing the best modern military equipment, and supporting local military industries. The army is qualified to be among the best armies in the region.⁽⁹⁰⁾ He believes in the forces' foundations such as qualified human resources, advanced weapons and technology, and Military Industry.⁽⁹¹⁾

Therefore, he encourages the organization of military exhibitions, the most important of which are: the International Defense Exhibition and Conference (IDEX). It was launched in 1993 and was one of the innovations of His Highness.⁽⁹²⁾ The exhibition is held every two years and displays the latest findings of modern technology in the air, sea, and land military industries, including aircraft, ships, armored vehicles, war machines, and missiles.

His Highness also provides the forces with military-trained and qualified national staff. He follows up and supports military academies and colleges.⁽⁹³⁾ He also honors their graduates. He clarifies that the human element is the most important factor in making the armed forces. He says: “The first of these foundations is to give great importance to the citizen human element. It is the backbone of any modern armed forces and the source of superiority. No matter how important military technology is, it must be accompanied by a trained and educated human element, who believes in the mission and possesses the will of fight, sacrifice, self-confidence and capabilities.”⁽⁹⁴⁾

His Highness developed local military industries and established Emirati companies in the military field. The products became in demand globally, including Tawazun Company, Caracal Company, Burkan Munitions Manufacturing Company, Abu Dhabi Ship Building Company, and Nimr Company. His Highness also supervised the success of the first Emirati drone. (95) He also inaugurated the advanced weapon system in the Black Hawk attack aircraft, (96) and the updated vehicle “Ajban” produced by the Emirati Nimr Company, affiliated with the Emirates Defence Industries Company. (97)

The vision of His Highness Sheikh Mohammed bin Zayed Al Nahyan for education, development, and youth

A great leader like His Highness Sheikh Mohammed bin Zayed has a clear vision for education, development, and youth. He learned from the school of Zayed the Founder, who considered education the most important factor in achieving development.⁽⁹⁸⁾ Youth is the “first building block” for the development of the Union in the future.⁽⁹⁹⁾



His Highness Sheikh Mohammed bin Zayed Al Nahyan gives speech at the closing ceremony of (Majlis Mohammed bin Zayed for Future Generations), Abu Dhabi, March 8, 2017

He has chaired the Abu Dhabi Education Council since its establishment in 2005. He has made many efforts to enhance educational standards in the Emirate of Abu Dhabi to reach the best and highest international levels. He attracted the most important universities, such as the Sorbonne University in Abu Dhabi in 2006,⁽¹⁰⁰⁾ and New York University Abu Dhabi in 2007.⁽¹⁰¹⁾

He wants to develop education in the country to be number one in the world, and he will not accept number two as an alternative. He said, “Our reliance on science and knowledge to achieve comprehensive development is the only way to get our country to the stage of qualitative

production that does not depend on oil as a basis for our income. This has been proven by the experiences of countries that do not have those natural resources.”⁽¹⁰²⁾

Therefore, education represents the future, and he is not satisfied with any education. Rather, he aspires to a qualitative education with certain purposeful characteristics.⁽¹⁰³⁾ He needs modern education with international standards and supports excellence in science and technology. The education outcomes support the national economy. It also supports the pivotal role of technical and vocational education. The enlightened education stands as an impenetrable wall against extremism and terrorism. Finally, education enhances moral values, as the quote: “for nations have morals as long as they remain, and if their morals are gone, they are gone”.

Among the most important initiatives in education:⁽¹⁰⁴⁾ are the Sheikh Mohammed bin Zayed Scholarship for Higher Education, the Mohammed bin Zayed Award for the Best GCC Teacher, the introduction of moral education in the school curricula, the launch of the Kalima Project, and many other initiatives.

He always prioritizes the youth in his thoughts and conscience, as they are the hope of this country. This is why the state has allocated a ministry for youth and has established youth councils for interacting, listening, and applying their opinions and ideas. It aims to empower Emirati youth to become a model for leading the world’s youth in all fields.⁽¹⁰⁵⁾

He sends a message to the youth to take it upon themselves to send a positive message about the UAE by adhering to customs, traditions, and morals. Above all the youth adheres to the tolerant Islamic religion, and shows the world the Emirati human being and its strength.⁽¹⁰⁶⁾ He sees in the youth the hope and future of the nation, and that they are the true defense.⁽¹⁰⁷⁾

Sheikh Mohammed bin Zayed and future aspirations

His Highness Sheikh Mohammed bin Zayed Al Nahyan realizes that the world is experiencing major transformations. Therefore, preserving the nation’s achieved gains necessitates preserving today’s resources to be sustainable for the next generations. He wants the UAE to be “the best in various fields, and future will be the most advanced and brightest at various levels.”⁽¹⁰⁸⁾

From this standpoint, He attaches great importance to development plans and thoughtful strategies, in the short, medium, and even long terms. He realizes that the oil wealth will not last, and the day must come when the last barrel of it will be extracted. For this reason, it

is necessary to plan for such a day it will be a celebratory occasion because the country has established the right investment in education.⁽¹⁰⁹⁾

Accordingly, the government launched its plans for Vision 2021, “We are the Emirates 2031,” and “The UAE Centennial 2071.” The UAE also launched the “Foresight Strategy.” What does “foresight” mean?

Firstly, foresight differs from traditional analyses such as forecasting. Forecasting refers to short-term expectations in general, such as predicting interest or stock rates. The foresight focuses on the medium and long term, finding multiple future alternatives, instead of one.⁽¹¹⁰⁾ Therefore, foresight is not astrology or a form of divination or prediction of the unseen, but it is a science that has its foundations and rules. It reviews the currently available indicators to develop and confront all possible future scenarios and plans.

The UAE analyzes the opportunities and challenges in the vital national sectors and develops proactive plans to make qualitative achievements for the best interest of the UAE. His Highness Sheikh Mohammed bin Rashid Al Maktoum says: “The future will belong to those who can imagine, design and implement. The future does not wait; the future can be designed and created today.”⁽¹¹¹⁾

It is clear, that nothing is impossible for a state that has made “Nothing is impossible” its slogan,⁽¹¹²⁾ and has allocated a ministry within its government to the future.⁽¹¹³⁾ The state has put its foot on the process of development and is driving the future. The UAE reached Mars in 2021. The UAE plans to explore the moon. The UAE also has an ambitious mission the first of its kind to explore the asteroid belt. The UAE also passionately established the Museum of the Future⁽¹¹⁴⁾ to provide an interactive experience for visitors to live in and imagine the future. It will open new horizons that exceed imaginations. The museum represents the window through which they see the future, and the UAE government has made a promise to serve the future in 2020, represented in eight principles:⁽¹¹⁵⁾

1. People First: Customer-centred government services, designed to suit their needs, requirements, and preferences.
2. Prioritized digital services: Providing proactive digital government services to suit future lifestyles.
3. One-time-requested information: Interconnected and integrated government services require requesting customer data only once.

4. Data security and privacy: Sharing government data with entities in a safe and controlled manner that ensures customer privacy.
5. Unified, diverse, and consistent service channels: Providing government services through diverse, integrated, and consistent channels that suit the customers through a unified government interface.
6. Smooth and proactive experience: Providing seamless interconnected proactive services to the customer conveniently.
7. The customer's voice: Listening to the customer's voice and transparency in the measurement results.
8. Services of distinguished value: government fees that take is reducing the cost for the customer and increase efficiency in governmental entities.

The country's progress on this path is confirmed by His Highness Sheikh Mohammed bin Rashid Al Maktoum's welcome to the participants in the World Radiocommunication Conference 2023 by saying: "You are welcome to the country of the future, the United Arab Emirates." ⁽¹¹⁶⁾

The foresight strategy includes many initiatives: ⁽¹¹⁷⁾ the Future in 60 Minutes initiative, the UAE Strategy for the Fourth Industrial Revolution, the Arab Network for the Fourth Industrial Revolution, Tomorrow's Leaders Create the Future, the Guide to Tools for Foresight, 100 Global Trends for the Year 2050, and the Training Program for Foresight.

To achieve these goals, His Highness Sheikh Mohammed bin Zayed summarizes the foundations of the state's future direction in ten factors: ⁽¹¹⁸⁾

First:

Developing the human being is the real capital of the state and the most important element of its wealth.

Second:

Science is a guarantee of sustainable development and creating a qualitative and diversified knowledge-based economy.

Third:

Team spirit has been the basic feature of our work over the past decades, and it must be strengthened and deepened during the coming years. Teamwork is the integration of minds, experiences, and efforts and is the path to the greatest achievements and successes.

Fourth:

Comprehensive development affects all economic, financial, environmental, and social aspects.

Fifth:

Elements of power represented by the armed forces, to protect the gains and preserve society.

Sixth:

Mobilizing and investing all of the nation's resources and capabilities to achieve its aspirations and ambitions.

Seventh:

Embracing talent from inside and outside the country.

Eighth:

Effective and positive partnerships with the world, through the state's openness to everyone based on the rule of mutual respect, common interests, and positive cooperation.

Ninth:

Rejecting all extremist, intolerant, and racist tendencies of all sources.

Tenth:

Achieving peace in the region and the world. On the basis that peace is the path to prosperity and development at all times and places.

He reminds the new generations, especially the youth that they will carry the banner in the future. They will embrace the nation's trust in their grandfathers. Therefore, in the coming decades, they need to double the effort, because the ambition is greater, and the challenge is more difficult.

Conclusion

The UAE leadership pays great attention to human development. The security that depends on the continuation of this nation and the preservation of its gains is more important than making buildings and factories. It is a legacy passed down from the founding fathers, most notably Sheikh Zayed bin Sultan Al Nahyan - may his soul rest in peace. He believed in the ability of the Emirati person to succeed and that the UAE people's destiny and existence are

connected with the federation. He devoted all his effort and time to serving the citizens and their well-being.

This vision was instilled in the thought of his righteous successor, Sheikh Khalifa bin Zayed, may his soul rest in peace, who honored the UAE citizens. His declaration of 2017 as the Year of Giving establishes social responsibility, the culture of volunteering, and serving the nation.

At the same time, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President, is leading the development process and believes that government work must develop and advance to achieve leadership and excellence and that the government's function is to serve the people.

His Highness Sheikh Mohammed bin Zayed Al Nahyan, the UAE President, may God protect him- has a strategy for developing human beings. His vision relies on knowledge and youth for the progress of the nation and the state. The armed forces represent a shield that protects the UAE from aggressors and maintains peace and stability. The UAE has no choice but to be armed with knowledge and search for other than oil sources of income to achieve a brighter future for tomorrow's generations. Therefore, the UAE youth must follow the founding fathers' sincerity, perseverance, leadership, determination, and ambition to raise the UAE flag and continue the blessed progress of the union.

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Chapter 5

Woman's Empowerment and Development

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**Contemporary
Emirati Studies**

Introduction

The empowerment dates back to the 1960s. It is linked to social movements calling for civil and social rights. In general, the concept of empowerment refers to the individual's ability to make a change effectively in the political, economic, and social aspects. This ensures the community members' abilities to make changes individually or collectively. Thus, the meaning of empowerment is the opposite of other meanings such as discrimination, marginalization, negligence, and exclusion.⁽¹⁾

Linguistically, empowerment is ability, highness, and elevation. It means enabling someone to do something.⁽²⁾ Technically, it refers to the process of giving power and authority, whether to individuals or companies to enhance their roles effectively. In addition, it assists the individual to gain independence in life or work and to improve performance to achieve the desired goals.

Significance

The concept of empowering women and girls relates to their abilities to gain power and control over their lives.⁽³⁾ Empowerment is broadly associated with several fields such as economics, society, politics, and development. The concept of empowerment is greatly used in the fields of administration and education. This concept emerged in the past decades meaning women's involvement in development entails many positive outcomes. The most important of which is achieving equality in society, confronting poverty, and realizing economic, social, and political independence for women. Empowerment enables women to enhance their position in society,⁽⁴⁾ as "it is impossible to imagine true development without the active participation of women. It is also impossible that there is a successful development experience if women do not benefit from its fruits, and its results are reflected positively on their lives with further development and empowerment in society in general".⁽⁵⁾

Women in Zayed's thoughts

The role of women is no less than that of men, and today's female students are the mothers of the future.⁽⁶⁾

Women in the UAE have a high status, which they hold with merit, appreciation, honor, and recognition besides men, with whom they mutually develop the society at various levels. This is not surprising in a country that relies on the principles of the Islamic religion, which honors women and gives them equal value as men. The woman is the mother whose satisfaction is highly required, and she is the wife, the man's residence, refuge, and reassurance. The woman is the daughter, sister, and aunt if kindly treated, a father, brother, or nephew can be protected

from Hell. Benevolence is different from legal expenses. Islam obliges a man to spend on a woman, but benevolence is what exceeds the limit of obligatory expenses, such as good treatment, good upbringing, care, attention, and so on.

Since the establishment of the UAE in the 1970s, women have had appreciation, trust, and full rights, because Sheikh Zayed bin Sultan Al Nahyan - may his soul rest in peace - held a progressive mindset, different from the prevailing thought in the region at that time. He had a far-reaching view of empowering women. Employed women can benefit themselves and society, and unemployed women disable the energy of one-half of society or even more.

Sheikh Zayed bin Sultan Al Nahyan - may his soul rest in peace- was one of the advocates of women. He sought to achieve equality between women and men in the UAE. He said in this context “A woman is a man’s sister, there is no gender discrimination. They are partners in the progress of the nation. The phrase accurately summarizes his philosophy and position on women’s empowerment.⁽⁷⁾ However, he moderately supported women, so he was a guiding and faithful leader, he sought to identify both the rights and duties of women so that they do not forget to perform their duties amid the pursuit of self-realization and ambition.

Sheikh Zayed bin Sultan Al Nahyan’s position towards women is that he held the stick from the middle. He is “a supporter of women,” but he is also her sincere advisor, and he does not want her to go too far in demonstrating her skills and abilities at the expense of her family and home. In his view, the woman is an essential part of the family, if she is good, society will be good, and if she is corrupt, society will be corrupt.

Sheikh Zayed bin Sultan Al Nahyan’s position on women raises admiration and reverence. He declared his insightful vision when it was common to undermine women’s rights and personalities in the name of religion, customs, and traditions. This requires examining the motives that shaped this position and created this deep and absolute belief toward women in general and Emirati women in particular. He declared several times that he gave her confidence. As Her Highness Sheikha Fatima bint Mubarak - may God protect her - said, Sheikh Zayed’s trust in women knows no bounds.

It is no secret that this trust is a necklace around the women’s necks. At the same time, it is an honor and duty for every Emirati woman.

- It is an honor because every Emirati woman sincerely feels that this message is from the father, Sheikh Zayed - may his soul rest in peace - to her personally, and that he cares for

her in particular and places his trust in her specifically, and this is a great honor.

- It is a duty because it places a great responsibility on the shoulders of every Emirati woman to ensure that she lives up to this absolute trust at every time and place given to her by a leader, a father, and a wise man whose outlook has always been proven by time to be correct.

Hence, it is important to point out some of the reasons for his interest in women from his positions, his immortal sayings, and his pioneering achievements.

The Reasons for Sheikh Zayed's Focus on women:

- In his view, women are not just numbers, but partners in developing society.
- She is the one who raises the next generations, and the strength of women will be reflected in these generations.

Sheikh Zayed's vision for women's education

The effort made by women in the Emirates is a great, honorable, and appreciable effort. I hope to see Emirati female physicians, engineers, and diplomats.⁽⁸⁾

Sheikh Zayed bin Sultan Al Nahyan - may his soul rest in peace - believed that educating women was the gateway to developing society. From this point of view, his vision begins as a capable human being who is naturally qualified to learn and excel. He sees Emirati girls as serious and ambitious. He cited evidence for this opinion, including, for example:

- An increase in the number of female graduates. This reflects the degree of interest in learning between both sexes.
- Women do not hesitate to do any required work. This reflects the constant readiness to work and serve the country.

Therefore, he believed that educating women was a duty for the state, but at the same time, he emphasized that educating the rising generations was a duty for women. Educating women is not only educating an individual but also educating an entire generation. His vision of educating women seems to be an end and a means at the same time.

- An end, because he wants her to be an educated, active citizen, armed with knowledge primarily for herself.
- A means, because educating women is the bridge to educating the family and then to creating a conscious, educated, and cultured society.

When a woman learns, she can lead her family, teach her children, bring them to the highest levels, and move the family and children from one condition to another and from one level to another. The family is the basic building block of any society. For this reason, and to guarantee the right to education for all Emirati women, education was compulsory for males and females in the Emirates at the primary level from an early age, and free for all levels. Article (17) of the UAE Constitution stipulates, "Education is an essential factor for the progress of society, and it is compulsory at its primary stage, and free at every stage within the Union."⁽⁹⁾ This has resulted in an unexpected increase in the rate of women's education. The women also enrolled in general, evening, and adult education programs, and occupied appropriate positions in various university disciplines.

As a result, the UAE became among the most developed countries in the world in the field of women's education, according to United Nations statistics. The Emirati women moved from a conservative life, difficulties were the general nature of life, to achieve great prosperity in every sense of the word through education by the UAE leadership. With special and direct attention since the establishment of the Union State by the late Sheikh Zayed bin Sultan Al Nahyan, women's education became one of his priorities, making the UAE at the top of the list of Arab countries in terms of development.⁽¹⁰⁾

He not only promoted the education of young girls but also of women who missed the chance for education. Therefore, "In parallel with these efforts, Sheikh Zayed bin Sultan eradicated women's illiteracy." Directed to educate Emirati women, who missed the opportunity for education. It significantly indicates his interest in educating women and eliminating their illiteracy. He established many classes and centers concerned with adult education and eradicating the illiteracy of female citizens, and opened special evening classes for education programs. The illiteracy rate among Emirati women decreased significantly from more than (97%) in (1968) to about (7%) in (2015).⁽¹¹⁾ These numbers also indicate the UAE leadership's early desire and keenness to empower women.

Sheikh Zayed's vision for women's employment

Sheikh Zayed affirmed the right of women to work, and he often declared the preference of working women to contribute to developing their society over non-working women. He repeated this in various situations, but with certain controls that would create a balance between different parties. Women do not exceed their limits to achieve their goals and ambitions. At the same time, women can go out to work, and they strive to do so, as one of their rights, but in light of the following controls:

- Preserving religion.
- Preserving authentic Arab customs and traditions.
- Choosing jobs that preserve respect and dignity.
- Caring for the husband, family, and home.

Perhaps the last rule has a great significance for the position of Sheikh Zayed - who supports women, reasonably, without bias, and without neglecting men's rights. Sheikh Zayed explained a woman's commitment to her duties towards her husband, family, and home. The work outside should not be at the expense of their primary role inside their home. It should not cause them to fall short of their first duties in life. This is not a disparagement of their status as much as it is an acknowledgment of their importance at home, and that they are the pillars upon which it stands.

The basis of Sheikh Zayed's vision for women

This vision that Sheikh Zayed - may his soul rest in peace - requires us to address (the basis of Sheikh Zayed's vision for women), according to Jamal Sanad Al-Suwaidi in his book (Women and Development).

1. The position of the Islamic religion towards women

Sheikh Zayed had a moderate religious background, which created his wise and balanced personality, and the formation of his vision of life in all its aspects, including women. He believed Islam had honored and gave women the proper status. Therefore, he supported them, provided for their needs, and gave them their rights. He used to say, "Islam has lifted women from the darkness of oppression, enslavement, ignorance, and backwardness, affirmed their personalities, and guaranteed their rights in various fields."⁽¹²⁾ If this is Islam's position on women, then his position is the same because he is convinced that Islam is correct. He declared on another occasion (I support women's work, and how can I not support it if the Islamic religion has supported it?)⁽¹³⁾ Islam has given to women for fourteen centuries what women are now trying to do in countries of the world.⁽¹⁴⁾

The religion-based view of Sheikh Zayed bin Sultan Al Nahyan towards women reveals a deep and civilized understanding of the purposes of religion concerning his position on women and their assigned roles in society. He believed that respect and appreciation for women are indicators of what distinguishes society in terms of religious commitment and cultural advancement.⁽¹⁵⁾ Women's participation, rights, and social roles conform with the teachings of the Islamic religion.⁽¹⁶⁾

2. His self-conviction with the idea of justice and equality among all people.

Sheikh Zayed bin Sultan Al Nahyan has always felt that people are equal, following the example of the Prophet - peace and blessings be upon him -: “People are equal like the teeth of a comb”,⁽¹⁷⁾ and he did not differentiate between young and old, or rich and poor, or woman and man. On the contrary, he treated people in a manner that showed good character, which made him a role model and example.

Unfortunately, before oil, women did not receive equal treatment with men. Perhaps Sheikh Zayed’s deep concern to enhance the role of women, and open all areas for them to learn, work, and participate in development, was his feeling that they had suffered a lot during this pre-oil period. It is important to take full rights in the post-oil phase. Sheikh Zayed felt the injustice that was being imposed on women. Therefore, he was “her supporter,” as he used to say especially with the presence of role models, who proved to him indisputably the competence of Emirati women and their superiority when given the opportunity. They demonstrated to Sheikh Zayed their extreme patience, courage, strength, and endurance.

3. Being an eyewitness to the potential of women in Emirati society before oil.

In the pre-oil era, women shared the harshness of life with men, and they lived real suffering under the pressure of the many duties under those difficult circumstances that only those who lived through knew them.

The duties of Emirati women performed inside and outside the home include:⁽¹⁸⁾

- Taking care of household affairs: cooking, cleaning, and raising children.
- Transporting water from distant wells to housing in pottery jars.
- Selling the fish caught by the men.
- Purchasing supplies and household supplies from the value of the sold fish.
- Taking charge of livestock, including sheep and camels.
- Taking care of farms, including plowing, sowing, harvesting, and so on.

These are just some of the duties, and the list goes on. Sheikh Zayed bin Sultan Al Nahyan experienced all and more and was an eyewitness to women’s suffering at that stage, just as he was an eyewitness to their strength, endurance, toughness, and composure. He closely observed the important roles played in the pre-oil phase in Emirati economic, social, and developmental roles alongside men”.⁽¹⁹⁾

Women supported the family in men's absence, especially on pearl diving trips.⁽²⁰⁾ This undoubtedly strengthened the confidence of Sheikh Zayed bin Sultan Al Nahyan, in their abilities to work and bear various responsibilities that are not limited to the scope of the family and home only. He has deepened his belief in women's rights and the great contributions to development as an essential element of citizenship's human wealth.⁽²¹⁾ Therefore, he saw that neglecting women's empowerment means disabling large human energy for no reason.

4. The role played by female characters close to him:

Sheikh Zayed gave Emirati women remarkable confidence, and the previous factors mentioned have contributed to forming this confidence. However, the influence of his personal experience through which he admired two Emirati female characters. They profoundly affected the formation of Sheik Zayed's personality because they represent two prominent examples of the strength of Emirati women. They demonstrated the ability to work, struggle, and succeed under difficult circumstances. In addition, Sheikh Zayed touched on the essential roles that both of them played. In society, especially in the pre-oil era.

These two characters are:

First: Sheikha Salama bint Butti Al Qubaisi, may her soul rest in peace.

She was one of the first important figures to influence the life of Sheikh Zayed, played a prominent role in shaping his personality, left a deep imprint on the nature of his thinking and patterns of behavior, and represented the role model he followed.

She is Sheikha Salama bint Butti bin Khadim bin Nahiman Al Hamed Al Qubaisi, wife of Sheikh Sultan bin Zayed Bin Khalifa Al Nahyan, Ruler of the Emirate of Abu Dhabi (1922 - 1926), and the mother of Sheikh Zayed bin Sultan Al Nahyan - may their souls rest in peace.

Sheikha Salama was "a generous, wise, benevolent, and patient woman. She had insight, a far-sighted vision, and an unparalleled awareness."⁽²²⁾ She had a great influence on Sheikh Zayed. He inherited from her wisdom and the depth of her outlook on life. "He learned from her school, patience, and strength the meanings of tolerance. This helped him in public life to achieve truth and refute falsehood. Accordingly, he worked to eliminate injustice and affirm their right to a decent life, like men in all areas of life."⁽²³⁾

Second: Her Highness Sheikha Fatima bint Mubarak Al Ketbi, may God protect her

Sheikha Fatima bint Mubarak Al Ketbi is the second important female figure in the life of

Sheikh Zayed, and she is influential in shaping his vision and appreciation for Emirati women. She is the Mother of the Emirates. She accompanied Sheikh Zayed on the long journey of struggle before oil, and the journey of creating and reconstructing the country after the advent of oil. She stood by him in various difficult situations, especially at the beginning of the founding of the UAE, and his early efforts to modernize the country and establish its infrastructure.”⁽²⁴⁾

Sheikha Fatima has a strong personality, patience, and perseverance. She does not know the impossible nor surrender to circumstances. Her ideas or aspirations are not dreams or wishes, but she embodied them all in a tangible reality, translated into work programs and initiatives, and therefore the achievements were great.⁽²⁵⁾ This is a practical example of Emirati women who are creative when given the opportunities.

Sheikha Fatima faced many challenges, yet she accepted the challenge with determination and will, and took the duties placed on her seriously and firmly. She aims to spread awareness about the Emirati women's rights and duties. She provides facilities for Emirati women to be effective members of society because she believes that women's success is the success of the entire community.

She often announced, in various situations and contexts, that all the work she does in the Women's Association and the Women's Union is the result of the directives of Sheikh Zayed bin Sultan Al Nahyan. He encouraged her to serve women in the Emirates; he was a role model in giving. She led the women's movement, utilizing the rich aspects of her personality and generosity. She accepted to move forward and chose the difficult path. She was an example and role model of a woman's true giving to her country, home, husband, and children. She has the qualities of a pioneering leader of the women's movement. In addition, she has determination, will, and acceptance of diligent work.⁽²⁶⁾ Therefore, she has always been a role model for all women worldwide.

Sheikh Zayed bin Sultan Al Nahyan gave her the confidence and opportunity to transform ideas and dreams into reality. Sheikh Zayed's support and patience are the first reason for Sheikha Fatima - may God protect her - to make all these achievements. She is at the same time, not a woman like other women. Rather, she is a completely exceptional woman. With her bright ideas, strong determination, and sincere will, she empowered Emirati women and enhanced their roles in the UAE.

The achievements of Emirati women would not have been possible without the efforts of the

Mother of the Emirates, Sheikha Fatima - may God protect her. Her wise vision allowed Emirati women to assume their place in all areas of public work, by implementing the vision of Sheikh Zayed - May his soul rest in peace - regarding women, and turning them into policies and programs on the ground. Sheikh Zayed referred: "Sheikha Fatima succeeded in understanding my goals and ideas, and turned these ideas into successful experiences in all fields." ⁽²⁷⁾

She said in appreciation for Sheikh Zayed's great efforts, and gratitude for his great grace: (God wanted goodness for our people, and a blessing for our great country, so God gave us Zayd, whom the UAE people and the whole world know. ⁽²⁸⁾

Mother of the Nation

An example of an Emirati woman

I believe that education is the window through which women view the civilization of nations, and it is our means of keeping pace with the process of development and progress and the advancement of our society. ⁽²⁹⁾

Sheikh Zayed bin Sultan Al Nahyan - may his soul rest in peace - always set an example with Sheikha Fatima bint Mubarak, for taking care of the affairs of her husband, family, and home despite the maids around her. Because of her high sense of responsibility for her country and people, specifically women, she seeks to obtain equal rights as men, in line with the vision of Sheikh Zayed bin Sultan Al Nahyan, who personally supervised all steps to empower women in Emirati society, to ensure their achievement according to the planned and accepted approach. Sheikha Fatima bint Mubarak praised the farsightedness of Sheikh Zayed bin Sultan Al Nahyan - may his soul rest in peace - regarding the seriousness of the Emirati women. Emirati women exceeded Sheikh Zayed's expectations and deserved his trust. These are all things that please us, and make us grow more proud." We are proud of the Emirati women.

We are increasingly confident in women's ability to overcome the few remaining negatives with the same ingenuity. ⁽³⁰⁾ Sheikh Zayed bin Sultan Al Nahyan said in this regard, "The Emirati women's achievements during this short period bring great happiness, and convince me that what we planted yesterday has begun to bear fruit today. ⁽³¹⁾

Her Highness Sheikha Fatima bint Mubarak - may God protect her - believes that women in the Emirates have a distinct role in shaping generations. The UAE provides women with all requirements to perform the required tasks. The UAE has paid all its attention to the

advancement of women and has endeavored to promote women's development to achieve their empowerment. Emirati women always lived up to the good expectations did not fall short, and confirmed their abilities in all fields and levels.⁽³²⁾ How did we reach this stage of empowerment? How were things done until the goal was achieved to the level we are witnessing today?

Stages of the women's movement in the UAE

The women's movement in the UAE went through two stages:

- Foundation: Laying the building blocks in the field of women and children
- Empowerment: Promoting the confident and capable presence of Emirati women in various workplaces and positions

In the beginning, it was a founding movement to lay the building blocks in the field of women and children, to establish institutions such as the General Women's Union, and women's associations in various emirates, and to promote new values in society. Over time, Emirati women and social workers gained experience and confidence. Then they moved to another stage. The empowerment stage, in which the scope of Emirati participation expanded at the global level, and at the Arab level became more effective and influential, while at the local level, signs of the boom we are currently seeing in the status of women in society. The UAE provided methods that support their presence and overcome the difficulties that stood in the way of their ambitions. It is no longer acceptable for women to be isolated from the broad movement of change that society is witnessing, and the accomplishments that are being made gradually. It was normal to take their place alongside men in various fields. These steps contributed to Emirati women entering the new millennium, with ambitions that knew no bounds, supported by the UAE leadership, so that they could move forward strongly in areas associated in people's minds as exclusive to men. Women became ministers and members of the Federal National Council. For example, women continue to achieve their ambitions with confidence and ability.⁽³³⁾ Sheikha Fatima - may God protect her - says: "From the beginning, we have prepared a specific goal, which is to create a balanced personality for women in our new life. We did not want to create a breakthrough that would shake the pillars of society and cause women to lose themselves and confuse themselves between concepts and conflicting ideas. Our goal was the final, gradual development that women would absorb and society would accept stage after stage⁽³⁴⁾. The work is accomplished according to planned preconceptions and visions to keep pace with modernity and urbanization.

Sheikha Fatima bint Mubarak's vision for women's education

We previously discussed Sheikh Zayed's vision - may his soul rest in peace - for women's

education, his position on not neglecting women's competencies in the state, and his link between that and the teachings of the Islamic religion, which commands us to learn and work without discrimination between women and men. He was aware of the positive impact of women's education on the family and society. The position of Sheikha Fatima - may God protect her - does not differ on this basic and pivotal issue. Therefore, she led an early campaign for girls' education and called for free education and its opportunities to include both males and females. She said, (Education is the real wealth that must be preserved and nurtured. Any girl has the legal right to an appropriate education). Thus, as soon as the establishment of the United Arab Emirates, women's work began to form a force and women became responsible for raising new generations and realizing the dream of creating a modern state.⁽³⁵⁾

The UAE is participating in realizing the dream of creating a modern state because it realizes that "the greatest enemy is ignorance, and for women to achieve their status and play their role in the process of social and economic development they must have education and knowledge, so that was the beginning of the path. She said. "There is no way for nations to progress except by acquiring the best knowledge."⁽³⁶⁾

When Sheikh Zayed bin Sultan Al Nahyan took over the reins of government in Abu Dhabi in 1966, there were only six primary schools, with no more than 578 students, and girls' opportunities for education were few."⁽³⁷⁾ However, this number has increased year after year, with the tireless efforts made by Her Highness Sheikha Fatima bint Mubarak - may God protect her. She began to meet with women and convince them to enroll their daughters in school. Therefore, they have opportunities to improve their personal, social, and professional lives. She has succeeded increasingly and steadily. Although it is not as easy as it seems because some families reject the idea of educating girls, what matters is the result, and the hardship is forgotten once the goal is achieved.

For those who adhered to the idea of rejecting girls' education, Sheikha Fatima referred to them in one of her speeches, "Illiteracy is not only the illiteracy of reading and writing, but rather it is the illiteracy of behavior, thought, and outdated customs and traditions that hinder the growth and civilization of countries and nations. The illiteracy ideas have nothing to do with the present world.

Sheikha Fatima's role is not only limited to formal education but also encourages girls in all educational stages, enhancing extracurricular activities, and supporting the capabilities and skills of personnel in the field of education. The associations of the General Women's Union

and the Ministry of Education cooperatively provided a distance learning system taking into account women's family circumstances and needs. In addition, Her Highness supported women's acquisition of practical skills by directing the organization of training courses in the fields of secretarial, computer, etc. It is a craft skill that helps women to enter the labor market.^{”(38)} This indicates her attention to the details of matters, her interest in all women's groups in society, and her desire for no one to be left behind in the world of education.

Sheikha Fatima bint Mubarak's vision for women's employment

If work is a woman's right, it must not be at the expense of her responsibility as the educator of generations.^{”(39)}

Women's work is important, and it is natural for women to move from education to work, but this work should not be at the expense of the family. Sheikha Fatima believes that women are essentially educators of generations and that their first role is at home. Then, if she can reconcile home and work, the society will assist her.

Her opinion is in line with the opinion of Sheikh Zayed - may his soul rest in peace - who emphasized that it is important that a woman - working or not – must care for her husband, children, and home first, and then comes her attention to her professional work outside the home. The woman's commitment to her duties toward her home and family is “her first task that achieves a lot for society.” She also affirms that a woman's performance of her tasks toward her children and family is an unseen and unpaid work and for this reason, we must respect a woman's effort in her home and appreciate it truly.^{”(40)}

She also confirmed the culture of integration between home, work, and society. When women go out to work, men and society should provide suitable conditions. The women should continue their work successfully and fulfill their responsibility toward their children. The man must understand the nature of his wife's work, and the shortcomings that her work may mean, and perhaps he can contribute to covering these, particularly in family matters. Likewise, society must provide women with nurseries that can care for children in their absence, and working conditions that do not deprive them of the opportunity to care for their children. This is available to women in the UAE, although we always aspire to more.^{”(41)}

From care to empowerment

Words cannot express these tremendous achievements made by Her Highness Sheikha Fatima bint Mubarak - may God protect her - to the Emirati society in general, and Emirati

women in particular. She has worked continuously to provide job opportunities for women in all fields.

Women's participation in various sectors of society has increased at all levels, in economics, politics, education, health, and all fields. Through programs and initiatives of the institutions, she has worked to change the concept of social care in the country by moving from a care methodology to an empowerment methodology. She also paid attention to research and studies, while working to make health, social and cultural campaigns. This has a positive impact on the success of social and healthcare initiatives. "The efforts of Her Highness Sheikha Fatima bint Mubarak realize the development impacts at the local, regional, and international levels because these efforts inherently feed into the depth of development visions and strategies in the social and economic aspects. These impacts can be seen in the women's empowerment, which is an important factor." It relates to building human capabilities and honing talents through education and training, encouraging them to engage in all fields. Hence, Her Highness Sheikha Fatima's strategies and initiatives have achieved human development.⁽⁴²⁾

The most important pillars of empowerment include:

- 1975: Strategy for eradicating illiteracy and educating women.
- 2002: National Strategy for the Advancement of Women in the UAE.
- 2015-2021: The second national strategy for women's empowerment and leadership in the UAE.
- 2023-2031: National policy for women's empowerment in the United Arab Emirates.

The latest strategy provides a framework for public and private sectors and organizations to develop action plans. Those plans aim to strengthen the UAE's position among the most advanced countries in the field of women's empowerment. It is a continuation of the (National Strategy for the Advancement of Women in the United Arab Emirates) approved in (2002).⁽⁴³⁾ Since its preparation, this strategy has contributed to empowering Emirati women to participate in development, and the result of the efforts of Sheikha Fatima bint Mubarak is increasing in scope and breadth. The empowerment has exceeded expectations, and the role of Emirati women in sustainable development has been enhanced in record time.⁽⁴⁴⁾ Sheikha Fatima has contributed strongly to Emirati women reaching this level with their innate intelligence and skills. She believes in the ability and competence of Emirati women, and that success is not limited to men only.

The support and assistance of Sheikh Zayed bin Sultan Al Nahyan during the establishment

stage enabled women to invest in the available opportunities. Women - as Sheikha Fatima bint Mubarak, may God protect her, says - are always in the thoughts and minds of His Highness, and the daughter of the Emirates was - and still is - the focus of attention of the father leader, and His Highness always views her as the other half through which society advances. No comprehensive development can be achieved in the absence of real activation and optimal exploitation of this half, which is a human, social, and economic asset for any social development process.⁽⁴⁵⁾

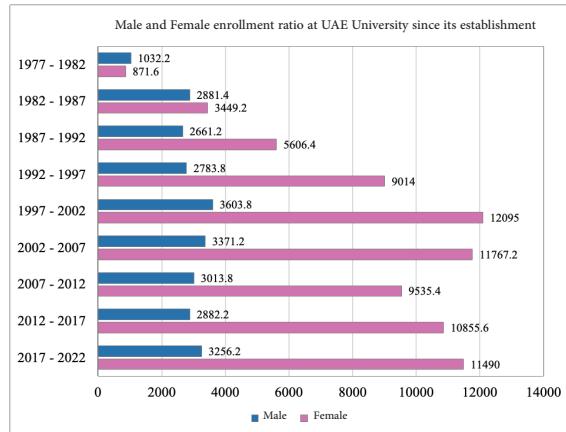
Roles in empowering Emirati women

The women empowerment in the Emirates has been witnessing huge leaps. The efforts of Sheikh Zayed bin Sultan Al Nahyan - may his soul rest in peace - and Sheikha Fatima bint Mubarak - may God protect her - opened the door wide for women to embark on the path of development and progress. They began to learn from science and culture. As a result of the spread of education and awareness, men began to understand the role of women in the family and society. The UAE women became engineers, doctors, teachers, accountants, journalists, and researchers, and their active roles in various fields.⁽⁴⁶⁾ The percentage of women's participation in higher education in the UAE increased until it became one of the highest percentages globally.⁽⁴⁷⁾ Sheikh Khalifa bin Zayed Al Nahyan - may his soul rest in peace - followed his father and increased the women's empowerment. Empowering women was an essential part of the empowerment project launched by His Highness in (2005).⁽⁴⁸⁾ It includes - but is not limited to - the establishment of the Family Development Foundation in (2006) to care for and raise families in particular, and women and children in general, and achieve a comprehensive vision in dealing with women and children's issues and sustainable family development.⁽⁴⁹⁾ His Highness Sheikh Mohammed bin Zayed Al Nahyan - may God protect him - has committed to following in these footsteps. He stresses the importance of women's participation in developing Society: "The role of women in the country is important, and exploiting this wealth to a large extent in running the country is very important."⁽⁵⁰⁾ He stated on several occasions that empowering women would remain a basic priority in the UAE.

The current position on the issue of women's empowerment can be expressed in numbers and statistics, as follows.

1. At the level of university education, the following graph represents the percentage of female and male enrollment at the UAE University since its foundation. It notices a convergence in the numbers of enrolled students of both sexes and a general increase in the enrolled students over time, with the number of females outnumbering males, especially in recent

years. This reflects social changes and educational policies followed to encourage female education.



2. The UAE overcame the literacy, and the female literacy rate in the country became equivalent to (98%) in (2022). ⁽⁵¹⁾ In this regard, the UAE has paid great attention to educating men and women together. In (1975), the literacy rate for adult men was (54%), and only (31%) for adult women. Today, the literacy rate for men and women is approximately (95%).⁽⁵²⁾
3. Women constitute about 70% of university graduates in the country.
4. In two federal higher education institutions (UAE University and Zayed University), women constitute 80-90% of the total number of students.
5. About 95% of females with a high school diploma enroll in higher education, compared to 80% of males.
6. Women constitute approximately two-thirds of the number of students pursuing their studies in public universities and half pursuing their studies in private post-secondary institutions.
7. More than 10,000 female students enroll in the Higher Colleges of Technology
8. Women constitute 56% of graduates in public universities in subjects such as science, technology, engineering, and mathematics.
9. The percentage of females at the Masdar Institute of Science and Technology in Abu Dhabi is 60% of the total Emirati graduates.

The United Arab Emirates has empowered women over the past more than fifty years, what can be mentioned are examples of much of what has already been done on the ground. Therefore, what will be stated below, although it seems a lot and large by the standards of other countries, is nothing more than a drop in the ocean of tremendous achievements that began

with a few steps, but were systematic and carefully studied, until they were able to bear fruit as is evident today realistically.

First: Women and Education

The education sector witnessed qualitative leaps, with schools and universities doubling as a result of state contributions continuing to support the education sector over decades, during which women have played a pivotal role in creating a distinguished educational environment that reflects the insightful vision of the late Sheikh Zayed bin Sultan Al Nahyan. Statistics indicate an increase in the number of Emirati female teachers in Abu Dhabi by (8.6%) during the period (2015-2022), as their number reached (4287).⁽⁵³⁾

The percentage of women's representation among faculty members in government universities and colleges, such as the UAE University, Zayed University, and the Higher College of Technology, increased significantly from the academic year (2012-2013) to the academic year (2016-2017), and similarly in private universities and colleges during the same period, as shown in the following table:⁽⁵⁴⁾

| Percentage of women as faculty members at universities and colleges in the UAE | | |
|--|-----------|-----------|
| | 2013/2012 | 2017/2016 |
| Public | 36% | 41% |
| Private | 26% | 32% |

Second: Women and health

Under the UAE leadership, Emirati women have achieved great successes in all areas of life without exception, and have attained honorable and advanced international ranks. In medicine and health, distinguished female figures have left their mark until today. Among the most prominent of these personalities: Salma Al Sharhan, called (Florence of the Emirates), was the first Emirati nurse who worked in the nursing profession for 52 years until she died in (2014) at the age of 80. Dr. Hosnia Gargash specializes in obstetrics and gynecology. Dr. Aisha Al Suwaidi was the first Emirati woman to specialize in dentistry in the seventies, and others. In the Dubai Corporation for Ambulance Services, women worked behind the wheel of ambulances. The female drivers include Maryam Abdullah, Zainab Al Balushi, Nujoud Al Tamimi, and Aisha Mohammad the youngest driver in the organization.⁽⁵⁵⁾

In 2006, the UAE established Fatima College of Health Sciences, to keep pace with the

constant demand and great shortage of skilled specialists in the field of health care, and to qualify and prepare the national medical staff. The college offers bachelor's degrees in five programs: nursing, pharmacy, physical therapy, radiography, medical imaging, and health emergencies (ambulance). ⁽⁵⁶⁾

At the end of 2012, the percentages of Emirati female health professionals were as follows: physicians (62%), dentists (67%), nurses (90%), and pharmacists (94%).⁽⁵⁷⁾

In 2013, the "In Our House is a Paramedic" initiative was launched in cooperation with the Emergency and Public Safety Department of the Abu Dhabi Police General Command, to spread awareness and health culture among women so that they can contribute to saving lives as much as possible until the arrival of the specialized medical team. Since the launch of the initiative, 8 training courses have been held, the number of participants in one course ranged from (30-40) participants, from different categories of female employees and housewives in the Emirate of Abu Dhabi.⁽⁵⁸⁾

Third: Women and military work

The Female police were not known or familiar in the local Emirati community in the pre-oil era, but in (1976) there was an urgent need to qualify female citizens to carry out police tasks in the areas of inspection and security in sensitive sites, such as airports, criminal investigation, accident departments, and police departments. Therefore, the UAE established many women's police schools to qualify new female members to carry out the duties and tasks of the women's police force.⁽⁵⁹⁾

As for the beginning of Emirati women's participation in the military field, it was with the establishment of the Khawla Bint Al Azwar Military School in (1990), which is the first military school to train females in the country and at the level of the GCC countries. Her Highness Sheikha Fatima bint Mubarak stood behind its establishment to encourage women to engage in military work. Her Highness Sheikha Fatima supported Emirati women to work in many jobs restricted to men.⁽⁶⁰⁾ The motive was to qualify Emirati women and seek their assistance in performing military tasks, as they are citizens fully qualified and authorized to perform all the social duties, including defending and securing its progress.

The Federal Law No. (6) regarding national and reserve service (2014) stipulates compulsory conscription for males and optional conscription for females to consolidate a partnership between the sexes in carrying out national tasks. Women are willing to bear the hardship of working in the military institution. They will succeed in this task because they passionately look

forward to serving and protecting their country, defending its interests, preserving its security and stability, and standing by the men in this sacred national duty.⁽⁶¹⁾

In this context, 15 Emirati women joined the first female firefighting unit of its kind at the state level, at the Sharjah Civil Defense Department in February (2018).⁽⁶²⁾ This reflects the important practical steps that have been taken in this regard.

Fourth: Women and media

Today, women hold several media jobs, including leadership positions, directly supervising the content provided through these channels to the local, Arab, and international communities, and presenting the best reality of women in the Emirates.

Emirati women proved themselves in various media and took advanced steps in the media. They have confirmed their ability to attend, compete, and make unprecedented achievements. They have also reached the highest ranks with merit and ability, to be an essential partner in the media process through their presence on all visual and digital platforms. They played a significant role in social media on all occasions and fields. This strengthened their position as active contributors who established conscious personalities and examples in the Arab world.⁽⁶³⁾

Fifth: Women and the Economy

Many steps have been made in this regard, such as the “Women on Boards of Directors” initiative, which was launched by Sheikha Manal bint Mohammed bin Rashid Al Maktoum, Chair of the UAE Gender Balance Council, and Chair of the Dubai Women Establishment, in November (2011), to enhance women’s representation in management in the public and private sectors, in line with the directives of the UAE leadership towards developing administrative governance practices in line with the best internationally recognized standards. In support of this initiative, the UAE Gender Balance Council, over the past years, signed a memorandum of understanding with several federal bodies, companies, and institutions. Emirati women participate in boards of directors and make a positive impact on the performance of companies. The Council’s pioneering role empowered women and developed their skills, to become an effective element capable of decision-making in all fields.⁽⁶⁴⁾ The UAE issued a decision in December (2012), requiring Emirati women to be members of the boards of directors of federal agencies, companies, and institutions.

On another parallel level, Emirati women have equal rights to economic resources. They have the right by law to possess lands, properties, financial services, and inheritances. Emirati

women also play various roles in the private sector, including entrepreneurship.

According to a report published by the Emirates News Agency in November (2015), there are (21,000) female business owners in the UAE.⁽⁶⁵⁾ In (2015) the Securities and Commodities Authority decided to represent women in financial market companies.⁽⁶⁶⁾

In 2019, the Labor Law prohibited discrimination between employees (Article 2), which would cause unequal access to a job, opportunities for promotion, continuity, and access to all rights equally. The law also prohibits discrimination between the sexes in job tasks. The Labor Law also does not allow employers to terminate the service of a working woman or warn her because of her pregnancy, and termination of service in this case is considered arbitrary (Article 122).⁽⁶⁷⁾ Many other decisions support women's economic empowerment.

As a result of this approach, the UAE has achieved unprecedented achievements in women's economic empowerment and integration into the labor market. According to the Global Gender Gap Report, issued in November (2017) by the World Economic Forum, the UAE ranked first in the Gulf. The UAE ranked second in the Arab world, bridging the gap between the sexes and affirming their equality in rights and duties, and ranked first globally in the Closing the Literacy Gender Gap Index.⁽⁶⁸⁾

Sixth: Women and Politics

The political empowerment program for women, adopted by the great founder, the late Sheikh Zayed bin Sultan Al Nahyan, is one of the most important features of the path of Emirati women. Women gained their rights to occupy the highest job ranks and decision-making positions and entered the political arena when Sheikh Zayed - may his soul rest in peace - expressed his full confidence and support for them, including the political work that forms part of this participation.⁽⁶⁹⁾ The General Women's Union in cooperation with the General Secretariat of the Cabinet and the General Secretariat of the Executive Councils in each emirate is considered the main partner. In following up on the implementation of the national policy for women's empowerment in the country, the General Women's Union holds periodic meetings with the relevant institutions to follow up and evaluate the progress in implementing the plans and propose amendments to ensure the achievement of the goals.

Emirati women achieved a major shift in their status in society in 2001. They were represented in the National Consultative Council of the Emirate of Sharjah, with five women, the first women who participated in the parliamentary work in the country, and their attendance

at sessions of the Federal National Council and raising the discussion of all national issues.⁽⁷⁰⁾

During the era of Sheikh Zayed bin Sultan Al Nahyan - may his soul rest in peace - the UAE laws contributed to providing all types of support to women. The UAE's accession in 2004 to the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) was a strong indicator of the UAE's tireless endeavor to improve the status of women to the ranks of their counterparts in developed countries.⁽⁷¹⁾

In December 2006, the first elections of its kind for the Federal National Council granted women the right to vote and run for office. In 2012, a Cabinet issued a decision to represent women on the boards of directors of federal bodies and institutions.

These efforts culminated in the appointment of Dr Amal Al Qubaisi as the first Arab woman to the position of Speaker of Parliament in the region in (2015). Then in (2016), Her Excellency Shamma Al Mazrouei served as Minister of State for Youth Affairs since the announcement of the ministerial formation that year, she became, at the age of 22, the youngest minister in the world.

In 2019, Sheikh Khalifa bin Zayed - may his soul rest in peace - issued a decision to allocate 50% of the parliament composition to women in the Federal National Council. Women and men now have the right to hold ministerial positions.

Where are we now?

Today, Emirati women are at the top of the global women's empowerment pyramid, competing with other women in many places in the world whose countries were founded much before the young UAE but have not been able to overcome the traditional view directed at women over time. What we are in today is a good natural result of persistent and continuous efforts in this regard, and perhaps the launch of the third version of the Emirati women's empowerment strategy is the clearest example, which is the national policy for empowering women in the UAE in 2023). This strategy came as a development of several previous strategies; it includes three main directions, serving as a map for the next stage. These directions are:

1. Making a cohesive and supportive family to enhance the role of women in society.
2. Integrating women into the labor market and future sectors in a balanced manner.
3. Developing capabilities and enhancing women's future skills.

Each direction includes detailed directions that branch out from it and define its path precisely and clearly. The strategy also includes so-called (policy enablers), which will provide support to achieve the goals stipulated in the previous directions, and it came in two dimensions:

1. Developing the legislative and regulatory environment that supports and enables women's quality of life.
2. Strengthening institutional work and partnerships at the national and international levels.

The women's development and empowerment in the Emirates indicate that Emirati women have more than 40% of the total employees in the education sector. The percentage of female representation is about 66% of workers in the government sector of whom (30%) hold leadership positions, and (15%) hold specialized and academic positions. Women also hold about (75%) of the positions in the education and health sectors.⁽⁷³⁾

In the field of (health), Emirati women occupy about (35%) of the jobs.⁽⁷⁴⁾ One of the most important achievements recorded for Emirati women is the election of Dr Mona Tahlak as the first Emirati Arab doctor to head the International Hospital Federation, during the World Conference held in Lisbon in (2023).⁽⁷⁵⁾ She is the first Arab woman to hold this high international position in the International Hospital Federation since its foundation.

As for the field of (military), Emirati military women have proven their competence in carrying out their job duties in all military, administrative, medical, and other fields. They have enjoyed all their rights in light of equal opportunities, occupied leadership and administrative positions, and attained the highest military ranks.⁽⁷⁶⁾

In the field of (media), Emirati women are present in modern and traditional media. They have strongly demonstrated their competencies in creating and presenting content and interacting with the target audience professionally.

Economically, the female business owners sector constitutes (10%) of the total Emirati private sector. The business women manage projects worth more than AED (40) billion and represent (15%) of the boards of directors of the chambers of commerce and industry.⁽⁷⁷⁾

In (2022), the UAE made remarkable achievements in the field of gender balance by advancing to eleventh place globally, and first in the Arab world, in the gender balance index issued by the United Nations Development Program. The UAE advanced (38) global positions within (7) years only from the establishment of the UAE Gender Balance Council in 2015. For

the second year, it ranked first in the Middle East and North Africa region in the Women, Business and Law Report issued by the World Bank and the Gender Gap Report issued by the World Economic Forum.⁽⁷⁸⁾

Concerning the field of (politics), it is sufficient to point out that the Cabinet of the UAE government includes (9) female ministers in the federal government, in (2023). Women's participation in the Cabinet also reached the highest rates in the world, which reflects the strong position that Emirati women have achieved due to the empowerment and political inclusion of women in government.

The main directions of the national policy for empowering women, in the social aspect, include an important clause, which is: (making cohesive and supportive family to enhance the role of women in society), with (8) directions including:

- Developing programs to enhance family cohesion and support women's fulfillment of their role in the family.
- Ensuring access to community support networks for women and overcoming the challenges and demands of life.
- Ensuring services related to life's needs in a reliable, safe, and easy manner, taking into account the privacy of women and families.
- Supporting the role and responsibilities of parents for people of determination by designing appropriate curricula and educational experiences.
- Promoting women's mental health in the face of societal changes, and enabling them to obtain therapeutic, counseling, and psychological rehabilitation services.
- Continuing development and provision of preventive and curative health programs for women, appropriate to the current and expected needs.
- Developing public and private sports facilities suitable for women's interests in sports taking into account women's needs.
- Establishing centers to protect abused women and children, and developing and expanding the scope of services provided by existing centers.

On the other hand, there are fundamental changes in the structure of the Emirati family, and in the acceptance of the role of working women in Emirati society monitored and identified mainly as follows:

- There has become greater appreciation and encouragement for working women and emphasis on the necessity of participation in economic development.⁽⁷⁹⁾ Consequently, the stereotypes about the societal roles of both men and women began to change.
- The spread of the principle of integration and many young men today prefer to marry girls educated and active in society out of intellectual parity and mutual dialogue.⁽⁸⁰⁾

Celebrating women in the Emirates

Emirati Women's Day⁽⁸¹⁾

Emirati Women's Day is one of the most important national days that the UAE celebrates in recognition of the achievements of Emirati women. It is celebrating the achieved gains, and monitoring the achievements made under the UAE leadership and support of the pioneer of women's work, Her Highness Sheikha Fatima bint Mubarak. Chair of the General Women's Union, the Supreme Council for Motherhood and Childhood, and the Family Development Foundation, (Mother of the Nation) - may God protect her.

The idea of devoting a national day to women in the UAE is the UAE government's commitment and belief in the active role of women in developing society and overcoming difficulties. It is in recognition of their various development contributions, and encouraging them to achieve the highest gains for themselves and their society. On November 30, 2014, Her Highness Sheikha Fatima bint Mubarak announced for the first time August 28 of each year as a national day to celebrate Emirati women and celebrate their achievements. The choice of this date came to consolidate the distinguished role played by the General Women's Union and the affiliated associations since its establishment. The UAE advances the process of empowerment and leadership of women. August 28 is the day on which the Supreme Council of the General Women's Union began drawing a unified action map for efforts to empower Emirati women, after announcing the establishment of the General Women's Union on August 27, 1975, and commencement of work on August 28, 1975.

Footnotes

- (1) The role of public benefit associations in supporting the political empowerment program in the United Arab Emirates, bulletins of empowerment, Ministry of State for National Council Affairs, June 30, 2015.
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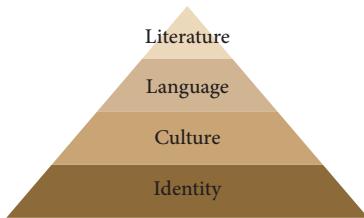
Chapter 6

Emirati Literature

Dr. Fatima Abdul Rahman Al Breiki

Introduction

Literature is “beautiful, precise speech that expresses literary truths and human emotions”,⁽¹⁾ and it is the link between language, culture, and identity. On the one hand, language is a form of its manifestation and use, rather it is the most creative form in it. On the one hand, culture is its vessel that carries thoughts, customs, beliefs, and heritage. As for identity, literature enters into its formation directly and indirectly, because language is one of the components of identity that includes material and moral heritage. Literature is at the top of the list of moral heritage. The relation between language, culture, and identity can be represented in the following diagram:



This is a brief presentation of the relationship of each of these components to literature, before talking about the history of Emirati literature and development.

◦ Language and Literature

“Language is the main means by which we manage our social lives,” says Claire Kramsch,⁽²⁾ and it is the greatest discovery known to man throughout the ages because it distinguishes us from other creatures. However, it cannot be limited to the field of speech and communication only, because it is broader than this scope. It carries culture, history, awareness, identity, and literature. All these aspects make a person distinguished by language. Speech alone does not make people distinctive. A parrot, for example, can imitate sounds but cannot think or create literature and culture.

Societies express themselves through language. Literature is an important form of linguistic expression about the past present, and future social awareness of anticipation. In addition, literature preserves the languages of many nations. The best example is the Arabic language, which preserved many words used in the pre-Islamic era, and no longer used in subsequent eras, but remained preserved through speeches, poems, and poetic commentaries. Consequently, literature contains language with its words and structures.

In conclusion, “language is a means of communication between members of society, and

if societies are deprived of language, they are deprived of the means of communication and expression; Societies communicate and understand through language, so nations cannot exist without language.⁽³⁾

◦ **Culture and Literature**

There are many definitions of culture and they vary greatly but present the same idea. Culture is a comprehensive term, which includes many elements that form the general concept. One of the definitions of culture is the arts, beliefs, customs, languages, and traditions that distinguish a nation from other nations.⁽⁴⁾ Culture: “is that homogeneous complex of memories, perceptions, values, symbols, expressions, and creations that preserve, for a human group that constitutes a nation, its civilizational identity within the framework of developments due to its internal dynamism and its ability of mutual communication.”⁽⁵⁾

The relationship between culture and literature is very close. Literature constitutes the vessel of written and oral culture, which records in the memory of generations’ biographies, songs, poems, proverbs, stories, legends, fables, riddles, jokes, expressions, and sayings.⁽⁶⁾ Official literature is included in the written aspect of culture, and popular literature is included in the oral aspect, another related term, is (heritage), specifically called cultural heritage, which means “practices, representations, expressions, and skills”,⁽⁷⁾ because heritage is an integral part of culture, it is divided into:⁽⁸⁾

- Material heritage: It is the human intellectual product embodied in everything that members of society create and contribute to, through which they express their historical experiences, such as archaeological sites. In addition to the museums that include antiquities, works of art, manuscripts, monuments, musical instruments, and handicrafts.
- Immaterial (moral) heritage: It includes customs and traditions, language, stories and anecdotes, music, sports and games, medicine, and beliefs and intellectual values .

A famous type of popular literature is included in the cultural heritage, which is the folk stories, or the tales according to the popular expression in the Emirates, and it represents the beginnings of the literary narrative that developed over time up to the short story and novel. The folk tale means “the story that is circulated orally from one generation to another, with multiple narratives and unknown authors. Some of these stories are based on imagination, and others contain a part of the truth that disappeared over time.”⁽⁹⁾ The folk tale has publicity and populism, therefore, it is one of the most influential types of literature, regardless of its oral origins and unknown authors. It is the most expressive and influential type in human lives.

◦ **Identity and Literature**

Identity is a system of social and moral values associated with the past, present, and future life. This system is based on the essence of people's existence and survival in the face of the challenges of dispersion, extinction, disintegration, and disappearance. This can be achieved by strengthening the basic concepts of a sense of belonging, such as citizenship, work, and productive initiatives.⁽¹⁰⁾ Identity is the essence, truth, and constant that can be renewed but cannot be changed, and it is unique like a human fingerprint.⁽¹¹⁾

Literature is part of language, and therefore it is part of identity. As mentioned, the three main sections of identity are:⁽¹²⁾

- Values and ethics
- Language
- Material and moral heritage - culture

This means that the literature of any group represents an aspect of its identity. Therefore, countries and nations care about their literature, preserving the inherited part, developing the present, and preparing an appropriate place in the future in the hearts and lines, that is, in the memory of the nation, and the pages of books.

This mutual relation and integration between literature, language, culture, and identity show us the importance of literature in the life of any society and indicates its great and pivotal role in preserving its cultural and historical legacy.

Hence, the importance of examining Emirati literature, and learning about the historical development of its various genres, up to our current era, its position among world literatures, and the UAE's pioneering role in the Arab and international world.

Emirati literature: history and development

◦ **History of Emirati literature**

Emirati literature in poetry and prose appeared over two decades before the foundation of the union. Poets then composed the poems that were transmitted orally in the fifties and sixties of the last century. The Emirati community practiced oral theatrical composition from an early age, presenting pre-prepared performances, with minimal capabilities. The historical overview of the beginnings of the literary movement in the Emirates concludes the following:

- The presence of an innate tendency toward literature among members of society before the foundation of the union.
- The ability to create poetry, prose, singing, theatre, preparation, improvisation, orchestration, and presentation, with minimal capabilities.
- Literature is an essential component of the culture of any society, and lack of literacy does not mean ignorance of literature.

Then in the seventies, with the establishment of the UAE, society gradually transformed into a society of science and culture. A parallel shift occurred in literary production in poetry and prose from oral to written. Publications were few at first, and they began to increase in quantity and quality over time. Stories and novels appeared alongside collections of poetry and printed theatrical texts. Thus, the literary contribution continued for approximately 50 years until it developed through experience, practice, contact with other cultures, and exposure to the literary productions of other writers. Then, Emirati literature matured and had a place at the Arab and international levels.

The order of the UAE literary genres is poetry and theater first in the 1950s, then short stories and novels in the 1970s. This is consistent with the transformation of Emirati society from the oral form that prevailed approximately in the middle of the last century, to the written form that prevailed with the establishment of the UAE Union.

At the level of poetry, Salem bin Ali Al Owais, Khalfan Musabih, and Mubarak Al Uqaili were among the first poets to compose vertical poetry. (13) As for the iambic poetry, it appeared at the hands of Saqr Al Qasimi, who is the historical pioneer of iambic poetry in the Emirates. Ahmed Amin Al Madani is the pioneer and the person who continued to write in this poetic form. (14) In addition to other poets who contributed to establishing the poetic movement in the Emirates in that early period. Poets followed them throughout the sixties and seventies. The poem developed with the development of society, the spread of education, and the introduction of journalism and printing, which contributed to the publication of poems and collections more accessible to the reader. In the eighties, a group of poets had used new methods in poetry composition and invented unfamiliar forms of poetic writing. This continued with the poets of the nineties, who represented innovation in opposition to the conservative classic trend, so prose poetry entered to be part of the poetic movement in the Emirates.

Poetry cannot be mentioned in the Emirates and the late His Highness Sheikh Zayed bin Sultan Al Nahyan - may his soul rest in peace - is not mentioned. He "had a renewed poetic

talent, possessed pure taste and the ability to distinguish between levels of speech. Above all, he had a broad poetic culture, to the extent that those who knew him described him as being (an encyclopedia of poetry). He had memorized much of the poetry of his predecessors, and was familiar with the vocabulary of Bedouinism.” And with the meters of poetry, purposes, and glorious poets, just as he had a strong connection with eloquent Arabic poetry.⁽¹⁵⁾

As for theatre,⁽¹⁶⁾ it received early, distinguished, and special attention from His Highness Sheikh Dr Sultan bin Mohammad Al Qasimi, Member of the Federal Supreme Council and ruler of the Emirate of Sharjah - may God protect him. He writes, composes, supports, and sponsors plays at the level of youth theater and festivals and theatrical events in the Emirate of Sharjah throughout the year. Most researchers believe that no fixed date is known for the birth of a theatre in the UAE. The Emirates theatre lacks documents supporting any date,⁽¹⁷⁾ but the early stages of theater in the Emirates date back to the 1990s in the theatrical spectacle created by natural artists, such as Sultan Al Shaar, Ali Bu Rahima, and others. Then artistic transformations occurred from the sixties of the last century until today, resulting in a gradual accumulation that has brought this popular art today in the Emirates to a distinguished position at the local, Arab, and international levels.

The Emirati novel⁽¹⁸⁾ appeared for the first time in (1970) when Rashid Abdullah Al Nuaimi published his novel (Shahanda), it was the only one in the seventies at the novelistic level, which is normal, because Emirati society was not an urban society before the establishment of the union, and the novel is the product of the city.⁽¹⁹⁾ Then a small group of novels were published - compared to the three decades before entering the third millennium. The writers generally lack the awareness of the difference between realistic and functional scenes. The novel is an almost literal depiction of reality, and the language of writing is far from the literary language. The writer presented his/her ideas and perceptions about the subject of the novel in the tongue of his/her characters directly, directing their movement and almost making them a lifeless doll, even if they looked beautiful.⁽²⁰⁾ This is in terms of artistic structure, but in terms of the content of the Emirati novel in the pre-millennium, it can be summarized as follows:

- Returning to the past, extending it vertically, and presenting history in a narrative form - not always a novel
- Staying in the present, spreading it horizontally, and presenting the writer's personal opinion on the subject of the novels
- The absence of anticipating the future and a new vision of the world that is compatible with the instant change

Finally, at the level of the story,⁽²¹⁾ Emirati society knew the popular story at a very early age, and it largely included the main elements of any narrative text, such as characters, events, plot, time and place, and so on. It was transmitted orally, which created the conditions for its spread because literacy was not common at that time. It can be considered the nucleus that facilitated the emergence of the story as a known art later. Its beginnings were at the hands of Abdullah Saqr Ahmed, who published his first collection of short stories entitled (Ruthless Hearts) in the late 1960s, then the group “Al Khashaba” (1975). Sheikha Al-Nakhi published the story “The Departure” in 1970. Then, the writers continued to publish stories or collections in the same decade of the 1970s.⁽²²⁾

- **Contemporary Emirati literature**

Where is Emirati literature today on the map of Arab and international literature?

This is an important question, and its importance comes from the aforementioned connected elements: literature, language, culture, and identity, which express all these moral concepts. Therefore, it is natural for every society to think about developing various types of literature to make it the best ambassador and one of its priorities. The negligence of literature indicates a lack of awareness of its importance in developing society because it reflects scientific, economic, and social development. Therefore, every society needs to strengthen its relationship with culture, just as it established its relationship with the economy and other development issues.⁽²³⁾

The UAE has steadily progressed after the establishment of the union at various developmental levels. The UAE leadership prioritizes literature and culture, especially with the innate inclination for literature in general, and poetry in particular. The appropriate conditions developed and encouraged emerging poetic talents to refine and strive to publish their works in print and digital newspapers and participate in competitions. They presented their poetic texts to critics to evaluate them help them develop their talents, and then print their collections. The poets became famous and large poetic collections have been translated into several international languages. In addition, Emirati poets remarkably participated in Arab and foreign international forums.

The UAE vertical (classical), iambic (free verse), and prose poetry have developed over the past decades, and poets were able to find their own spaces and distinctive voices that express their unique style of poetic writing. One of the most prominent things that happened after the third millennium was the shift of several classical poets to writing prose poetry. Their positions

ranged between non-acceptance and reluctant acceptance as another creative genre. Some poets had begun writing prose poetry. This is a major turning point in the creative line of these poets, and it records the interest in prose poetry, which has achieved great presence especially since all these poets have a remarkable position in the Emirati poetry scene! ⁽²⁴⁾

At the theater level, the UAE is witnessing a great development on the creative and artistic level. The number of Emirati playwrights, writers, actors, directors, technicians, and administrators, is increasing. The theatrical culture, enhanced by effective Arab and international festivals, has spread. Sharjah has become the capital of Arab theatre. ⁽²⁵⁾ The establishment of the Arab Theater Authority ⁽²⁶⁾ has contributed to establishing the name of the Emirates as a prominent station for the theatrical movement at the Arab level and has crowned the efforts of sixty years. UNESCO chose His Highness Sheikh Dr Sultan bin Mohammad Al Qasimi - may God protect him - to deliver a speech on World Theater Day in Paris in 2007, in appreciation of his efforts in serving theater worldwide.

The presence of several theatrical festivals in the Emirates indicates the current status that theater has reached in this era, including Kalba Festival for Short Plays, Khor Fakkan Theater Festival, Sharjah Gulf Theater Festival, Sharjah Forum for Arab Theater, Sharjah Desert Theater Festival, and Sharjah Forum for Theatrical Research. Other festivals include Dubai Youth Theater Festival and the Sharjah Award for theatrical writing for adult texts. The major steps that the Emirati theater took in a short period were not "to highlight itself and consolidate its identity but rather to be superior in the Gulf and Arab countries. The evidence for this is more than can be counted, as it suffices to mention the participation of Emirati theater groups in theatrical festivals and the achievement of the best awards. It is sufficient to point out the emergence of important playwrights and directors whose readings of some performances have proven the ability to advance and deal with this art creatively. ⁽²⁷⁾

On the other hand, the Emirati novel took a different direction with the start of the third millennium, quantitatively and qualitatively. Many new novelists appeared, and novelistic mature, open texts exceeding self-limits, narrating the past, or expressing the present. At the same time, female writers appeared remarkably in this period, because of the official support for the writers, books, and publishing houses. The demand for reading novels, especially with promotion through modern electronic media that is mainly close to the world of youth has created a broad base of readers who are enthusiastic about their favorite writers, which guarantees immediate sales of books as soon as they are published.

The Emirati novel has rapidly developed and captured the Emirati society's development, rapid progress, and change in the style of daily life. The women's engagement in educational fields and work allowed them to expand the margins of freedom and the ability to think independently. The Emirati woman used writing a means of expressing the life reality.”⁽²⁸⁾ The novel - which is described as a modern collection - has become an element of attraction for many young writers who have a desire to write. Fortunately, the general cultural environment in the Emirates is encouraging and tempting to engage in writing and authorship. This reflects the great interest that the UAE leadership gives to literature so that it assumes its appropriate position and Emirati writers become in the desirable place. This new generation, global readers, different from previous generations – is no longer satisfied with the recent local or Arab cultural production. All global creative symbols have become equally prominent, which confirms that the culture of the world has become one, a great human culture that has its effectiveness, presence, and position against attempts that seek to centralize culture in a narrow geographical place.⁽²⁹⁾

For the art of the story, at the beginning of the third millennium, a new generation, who learned about the experience of the previous generation and the middle generation, began to build its appropriate place and set out the artistic vision of the horizons of art. However, they were sometimes prisoners of the past, adhering to the framework of the traditional narrative. They tried to research the same contents and sometimes tried to delve into the specific human problem. Then gradually, they began to solve the issues and contents that dominated the short story in the three decades after the union. Until the beginning of the third millennium, they began to enter another dimension. The Emirati story addresses the self-other relationship and more comprehensive humanitarian horizons.

The role of the UAE in literature

- **The UAE embraces literature and writers**

The UAE's literary and cultural activity has gradually emerged and established and the UAE has embraced literature and creativity, and supported writers and intellectuals. The UAE made tremendous efforts, which paved the roads followed by many countries concerned only with production. As for the UAE, it looked at the issue responsibly and set its sights from the beginning to include everyone and make the process easier for every talent, from inside or outside the UAE. This enriches the literary arena with the best competitive productions.

The UAE leaders traditionally show goodness to others and distinctively and indiscriminately show kindness to everyone. The UAE has become a hub where writers meet throughout the year. It organizes book fairs, conferences, literary forums, and cultural awards. These include the International Prize for Arabic Fiction, which is one of the most important and prestigious literary awards to honor contemporary Arab writers. It enhances reading globally by translating and publishing the winning shortlisted novels into other major languages. The International Prize for Arabic Fiction also supports other cultural initiatives. “Nadwa,” is a creative writing workshop in which a group of promising young Arab writers participate under the supervision of a winning writer.⁽³⁰⁾

His Highness Sheikh Mohammed bin Zayed Al Nahyan, President of the UAE - may God protect him, is interested in poetry, literature, and culture in general. He is greatly interested in Nabati's poetry. He constantly provides support for poetry competitions and other events and cultural events. He sponsors and attends some of the cultural events. In addition, he always emphasizes his commitment to cultural activities and innovative initiatives for the local community in the artistic and literary fields.⁽³¹⁾

Emirati writer has countless opportunities, so it is sufficient to refer to the project National Cultural Encyclopedia,⁽³²⁾ launched by the Ministry of Culture and Youth in 2015, in celebration of the Emirati writer, to document:

- The literary, cultural, and creative product of Emirati thinkers and writers
- Data on active national cultural institutions
- Data, figures, achievements of Emirati thinkers such as writers, poets, and artists, and the history of the country on a global scale
- **The Emirates as an Arab and global cultural center**

The Emirates has a distinguished literary and cultural position. The Emirati writer is the UAE ambassador backed by the state-provided generous support to achieve this goal. At the same time, the UAE has been taking confident steps for several years to strengthen its cultural position at Arab, regional, and global levels. Achieving this goal requires continuous work and concerted efforts by several parties and entities. The first fruits have now begun to be harvested; A cultural report (Between the Lines) issued in mid-2022 by the Emirates Literature Foundation shows “the UAE’s leadership in the field of literature globally,” and the latest trends in the fields of reading and literature, heralding the emergence of a new golden age for literature in the region. This report included several literature-related positive statistics, such as:⁽³³⁾

- Reading-related events in the UAE increased by 7%.
- The number of references in Arabic on topics of reading and literature increased by 20%.
- The noticeable interest in independently published works, especially via social media platforms and on the Internet in the UAE by 27%.

The publishing industry, and some projects that combine Emirati and Arab literature on the one hand, and international literature on the other hand, such as the Kalima project, are among the most important stations that highlight the role of the Emirate of Abu Dhabi, and the UAE in general, as an Arab and international cultural center. The cultural visa attracts creative writers and intellectuals to practice their cultural activities in a suitable creative environment.

His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai - may God protect him - confirmed that “the UAE has become a pivotal center for the intellectual and cultural movement in the Arab region. The UAE has world-class cultural, artistic, and creative centers that support all forms of literary creativity and prepare the climate for writers to present the best products. The UAE has become a civilizational and cultural beacon at the regional and global levels.”⁽³⁴⁾ This Emirates-balanced model promotes openness to the world and adherence to the UAE identity. The UAE keenly presents “a unique model of a developed civilized society. At the same time, the UAE keeps the high principles of the Emirati identity.”⁽³⁵⁾

In conclusion, the scholar Abdul Malik Murtad said about the literary and cultural movement in the Emirates: “The greatest cultural and literary projects that restore the role of the Arab nation in creativity, and position in life: are in the Emirates. The Sheikh Zayed Book Award, the Million’s Poet Award, the Prince of Poets Competition Award, the Best Cinema Film Award, the Fastest Camel Award, the Fastest Horse Award, and the International Booker Prize. In this generous and honest Arab country, countless noble awards encourage all those with intelligence and ambition to excel in great creativity. No other Arab country has presented all these awards to instill competition between creative and ambitious people in various fields of life, except the Emirates?! Indeed, I imagine this country has become at the forefront of Arab progress and historical renaissance. The whole world respects the Emirates and that is due to the wisdom of its leaders, the heirs of the wise Zayed, the purity of their hearts, the modesty of their behavior, and their generosity and charitable and good works.”⁽³⁶⁾

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- (16) Theater: A form of expression of human feelings, thoughts, and emotions, and its means in this are the art of speech and the art of movement, with the help of some other auxiliary effects. See: Majid Saleh Bek, History of Theater Through the Ages, Dar Al-Thaqafiya for Publishing, Cairo, 1st ed., 2002, p. 10.
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Chapter 7

Food Security

Dr. Mohammed Abdulmohsen Alyafei

Food Security

Food and Agriculture Organization defines food security as that all people, at all times, have access to sufficient, safe, and nutritious food that meets their dietary needs for an active and healthy life. Differently, the traditional definition is that the state's self-sufficiency of resources is capable of meeting its food needs locally. The definition of the Food and Agriculture Organization is more consistent with the current economic transformations, and the liberalization of international trade in food commodities. This definition includes available and used quantities at the state level. The confirmed levels of food security mean food production within a single state that is equal to or exceeds local demand. The acceptable levels of food security mean a country's ability to provide goods and food in whole or part.⁽¹⁾

Over recent years, the world has witnessed many changes, including natural disasters, Corona, and international wars. This led to the slowdown of the economy and a steady rise in food prices around the world. This has accelerated the international efforts to achieve the UN Sustainable Development Goal 2: to end hunger in all its forms by 2030 to achieve food security and to ensure that everyone everywhere has enough good-quality food to lead a healthy life.⁽²⁾

On the local level, the United Arab Emirates is food secure, due to the vision of the late Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace, at the beginning of the foundation of the state. He said, "Give me agriculture, and I will guarantee you civilization," has found wide resonance throughout the country, as he stressed the importance of agriculture and linked it to civilizational development. The economic and social situation, the infrastructure, and the harmony of work at the federal level and local governments also play an important role in ensuring food security.

However, the UAE still faces six major food security challenges: 1. scarcity of arable land, 2. scarcity of rainfall, 3. poor soil, 4. low groundwater levels, 5. climate change that caused rises in temperatures and a threat to the environment, humans, and food, and 6. continuous increase in population expected to reach 10.6 million by 2029. Therefore, the UAE should develop plans and strategies to maintain food sustainability.⁽³⁾

Over the last few years, the UAE has intensified efforts and made many achievements in food security, such as the Emirates Council for Food Security. The Council aims to increase local productivity, diversify sources of production and importation, reduce food loss and waste, ensure food safety, improve food systems, and overcome food security-related challenges and

crises. This means that for any country to be food secure, it must meet the following criteria: provision of food, easy access to food, use of food, and food stability.

The components of food security

- Actual availability of food:**

The levels of food production, stock levels, and net trade.

- Financial and economic resources to secure food needs:**

An adequate supply of food at the national or international level does not guarantee food security at the local community level. Concerns about inadequate access to food have led to a greater policy focus on income, expenditure, markets, and prices in achieving food security goals.

- Food utilization:**

The way the body gets the most out of the different nutrients contained in food is a result of good care and nutrition practices, food preparation, dietary diversity, and food distribution.

- Stability of the other three components over time:**

Even if a person's food intake is adequate today, they are still food insecure if they do not have adequate access to food regularly, being at risk of deteriorating nutritional status. Poor weather conditions, political instability, or economic factors (unemployment, food prices) affect food security.⁽¹⁾

Challenges of food security in the United Arab Emirates

Food security is one of the major challenges facing the world today. It is not limited to providing sufficient quantities of food but rather extends to ensuring the quality of food and providing safe access for all members of society.

To meet these challenges, the United Arab Emirates relies heavily on its strengths, specifically its economy, high GDP, distinguished international relations, its continued use of modern technology and attracting global companies, and access to capital and low customs duties. The UAE's strict regulatory policies and access to human capital and distinctive infrastructure enhanced the UAE food security. However, the UAE faces several challenges due to the UAE desert areas and scarcity of arable land. The UAE cannot ignore water scarcity; excessive reliance on desalination; rising temperatures and high levels of food loss, waste, and overconsumption.

The UAE's opportunities are easy access to international markets, and a gateway to 1.5 billion citizens of the African continent and the Mediterranean countries. The UAE is an important and promising export market for bulk goods. The UAE is open to global markets. The UAE has a diversified economy, modern agricultural technologies, agricultural innovation, investments in science and technology, and prestigious universities. The UAE University, represented by the College of Agriculture and Veterinary Medicine, established in 1981 has provided the local market with more than 2,500 graduates. The university hosted an international conference on saline agriculture in 1990, then, the establishment of the Zayed International Program for Agricultural and Environmental Research in the Sweihan region, implementing experiments in saline agriculture. The International Center for Saline Agriculture has occupied an important place in the country's agricultural, water, and environmental strategy.

The UAE University and the College of Agriculture and Veterinary Medicine also hosted 1989 the First International Date Palm Conference, which has been held every four years since then. In 2005, the Khalifa International Award for Date Palm and Agricultural Innovation was established. The award aims to honor institutions, individuals, and entrepreneurs in developing the agricultural sector. To establish the concepts of science, technology, engineering, mathematics, and agricultural innovation in public education, the Ministry of Education established the Advanced Agricultural Academies in 2018 with hundreds of students worldwide.

The risks to be taken into account, for example, insufficient data; heavy reliance on global and regional markets, food consumption growth of 12% each year, and increasing population growth, as the population of the UAE currently stands at 9.34 million and is expected to reach nearly 11.5 million by 2025. This will increase pressure on natural and food resources.⁽⁴⁾

Global food problems

1. Hunger and food poverty: Millions of people around the world suffer from malnutrition and severe hunger, affecting their health and ability to work and learn.
2. Unfair distribution of food: There are challenges in distributing food fairly, as there is a great gap between rich and poor countries, and sometimes within the same country.
3. Impact of climate change: Climate fluctuations, such as desertification, floods, and rising temperatures, affect crop production and threaten food security.
4. Loss of biodiversity: Loss of biodiversity can lead to a decrease in various crops, compromising the ability to adapt to challenges such as diseases and pests.
5. Impact of policies and economics: Government policies and economic conditions can affect access to food and the ability of individuals to meet their nutritional needs.

6. Food waste and crop loss: Food waste causes significant loss of resources, both at the production or consumption level, which increases food waste. Although 3 million people cannot access or afford healthy food, about a third of food produced for human consumption is wasted or lost, with a financial loss estimated at \$1 trillion annually. This represents about 28% of the world's arable land production.

Wasted food in developed countries goes to landfills that produce greenhouse gases, which leads to the emission of more than 3 billion tons of these gases annually. Thus, food waste and loss is the third largest producer of greenhouse gases.⁽⁶⁾ To address these problems, the international community, local governments, and non-governmental organizations must cooperate to implement sustainable strategies to improve food production, food distribution, and environmental sustainability.

Hence, the UAE prioritizes food security in development plans, agriculture, and the use of the latest scientific and technological methods to increase food productivity. The International Center for Biosaline Agriculture addresses the challenges of agriculture and water. The UAE plays a significant role in achieving sustainable development at the regional and global levels. The UAE invests in knowledge, innovation, and research to find solutions to the challenges of saline agriculture and soil problems, innovates modern methods in the optimal use of water in the agricultural field, and develops agricultural strains adaptable to difficult environmental and climatic conditions.⁽⁶⁾

Types of agricultural production systems

First: Traditional agriculture

Traditional agriculture is a type of agricultural method that relies on traditional practices and techniques that have been inherited through generations without much intervention from modern technology. Traditional agriculture depends on climatic, environmental, and cultural conditions.⁽⁷⁾

Traditional agriculture has several characteristics:

- Use of traditional tools: Farmers in traditional agriculture rely on traditional tools and equipment that reflect the traditions of the community and local culture.
- Reliance on local expertise: Success in traditional agriculture is largely achieved by benefiting from local expertise and traditional knowledge passed down through generations.
- Agricultural diversity: Traditional agriculture encourages diversity in crops and animals,

which enhances their resistance to diseases and changing environmental conditions.

- Use of natural practices: Farmers in traditional agriculture avoid the use of industrial agricultural chemicals and rely on natural practices to maintain ecological balance.
- Integration with the environment and society: The traditional agriculture approach emphasizes integration with nature and cooperation between farmers and the community to achieve common goals.
- Preservation of cultural heritage: Traditional agriculture is part of the cultural heritage of communities, as it preserves practices that have been inherited through generations.

Agriculture is an ancient activity in the UAE and has been practiced extensively by the Emirati people in some areas of the country, such as Ras Al Khaimah, Fujairah, and Al Ain, and in some cases, such as Liwa Oasis. Traditional agriculture has developed rapidly in the UAE since 1971, despite several problems such as scarcity of water resources and arable land, soil salinity, difficult environmental conditions, high production costs, agricultural pests, and post-harvest losses.

Today, agriculture has become an economic activity that relies on the use of the latest technologies. Despite the challenges, the UAE has made efforts over the past decades to develop an agricultural sector and traditional agriculture. It is more capable of contributing to food diversity and the national economy, by adopting policies that limit the impact of these factors, and sustainable and climate-smart agricultural patterns. They focus on optimal investment of agricultural land, the quality of the local product, and enhancing its competitiveness based on innovative technologies and solutions such as soilless agriculture (hydroponics) and organic agriculture. It enhances programs combating agricultural pests, reducing loss and waste along the food chain, and expanding the base of interest in scientific studies and research in the agricultural field. ⁽⁸⁾

The people benefited from the aflaj in the past, in agricultural areas, such as the Al Ain region, the eastern, northern, and central regions to irrigate agriculture, which is an essential part of the lives of farmers in rural areas in the UAE. The aflaj, with its various (surface and underground) channels, formed a supportive means of transporting water from the depths of the earth to its surface for irrigating palm groves. This method demonstrated the engineering genius and skills of the people who invented the unique engineering system in “digging” these water channels over the past ages. The history of the aflaj is an integral part of the history of the people of the southeast of the Arabian Peninsula, (the United Arab Emirates, the Sultanate of Oman, the Kingdom of Saudi Arabia, and Yemen). ⁽⁹⁾

A falaj is known as a small artificial watercourse dug by human hands, and its source is the mountains or hills. Aflaj water goes through the channels to farms. (10) The engineering of the aflaj confirms the Emirati people's ability to plan and build channels that can sustain natural factors as an important economic resource. This irrigation system has played a major role since ancient times in cultivating vast oases of orchards.

The UAE significantly succeeded in 2020 in including the aflaj system in the Representative List of the Intangible Cultural Heritage of Humanity of the United Nations Educational, Scientific and Cultural Organization (UNESCO)- in the fifteenth session of the Intergovernmental Committee for the Safeguarding of the Intangible Cultural Heritage of Humanity of UNESCO. The aflaj is among the traditions, knowledge, and skills related to the construction of the traditional irrigation network system in the UAE, to ensure the equitable distribution of water. (11)

Second: Organic Agriculture

Organic agriculture is a type of agricultural method based on the principles of sustainability and non-use of manufactured chemicals such as fertilizers and chemical pesticides. Organic agriculture aims to achieve an agricultural system that is environmentally sustainable and conserves the soil, water, and air.

The UAE began to be interested in organic farming in 2004. The various individual initiatives created organic agricultural production for some types of vegetables and fruits. The UAE government also supported these initiatives in cooperation with the Abu Dhabi Farmers Services Center. The 25 traditional farms transferred to organic farming, to supply markets with healthy products of high quality and affordable prices, to support sustainable agriculture, and to preserve natural resources.

The most important organic farms in the UAE:

1. Abu Dhabi Organic Farms

The Abu Dhabi government encourages organic farming methods by providing various means of support. The government provides farms with different types of plants, from naturally treated seeds to nutrients, and natural fertilizers to control pests.

2. Emirates Biofarm

Emirates Biofarm is one of the largest organic farms in Abu Dhabi, extending over an area of 250 thousand square meters in the Shuaib area in Al Ain, and produces about 40 types of

organic vegetables and fruit rich in nutrients and vitamins and completely free of pesticides and chemical fertilizers.

The Emirates Authority for Standardization and Metrology approved and registered the farm. The farm has the German Organic Agriculture Certificate and uses Emirates Bio Fertilizer Factory non-GMO seeds and organic fertilizers.

3. Al Foah Farm

Al Foah Organic Farm is located on the main road between the Emirate of Dubai and Al Ain and is one of Abu Dhabi's organic farms for palm trees. It was established in 2005 on an area of 634.6 hectares and is the largest organic farm in the world for palm trees that produce organic dates. French Organic Certification organization "Ecocert approved Al Foah Organic Farm". Al Foah Organic Farm includes about 63 thousand palm trees, its annual production capacity reaches 113 thousand tons of dates, and the production is exported to more than 45 countries around the world.

This farm is not limited to growing natural dates, but it also supplies the market with different flavors of dates such as those covered with chocolate and dates stuffed with nuts, in addition to date molasses, date paste, and many other organic products.⁽¹²⁾

There are some main features of organic farming⁽¹³⁾ as follows:

1. Use of organic fertilizers:

Organic farming relies on the use of natural fertilizers such as organic fertilizer and green manure to improve the soil and provide nutrients to plants.

2. Reducing the use of agricultural chemicals:

The use of chemical pesticides is avoided, and farmers rely on controlling pests through natural means such as intercropping and biodiversity.

3. Preserving agricultural biodiversity:

The organic system enhances biodiversity by using diversity in crops and promoting the cultivation of local varieties.

4. Organic life cycle:

Organic farming relies on an accurate understanding of the natural life cycle and encouraging practices that enhance the sustainability of agricultural systems.

5. Maintaining ecological balance:

The organic system preserves the ecological balance and uses techniques that protect the environment and reduce the negative environmental impact. Adding organic fertilizer to the soil will protect the environment and benefit from the nutrients and organic fertilizer to enhance soil fertility and crop production.

The UAE University- College of Agriculture and Veterinary Medicine farm conducted a field experiment. The research shows that the production of marketable tubers, plant height, and specific gravity were greater in soil with added organic fertilizer. It is compared to soil without added organic fertilizer or with chemical fertilizers. ⁽¹⁴⁾

Third: Saline agriculture

Saline agriculture is based on growing crops and plant strains that can tolerate high levels of salinity. Its idea basically stems from nature itself and from the growth of plants that are naturally and instinctively resistant to salinity on sandy beaches, tidal areas, marshlands, and other areas submerged in salt water. One of the most famous examples of this type is the mangrove plant.

The UAE is increasingly interested in saline agriculture. It effectively confronts the scarcity of water resources and drought in addition to growing crops throughout the year and reducing the salinity of the soil, which gradually leads to a decrease in the size of agricultural land. The methods of this agriculture depend on reclaiming and reusing degraded agricultural land by planting some crops and fodder plant strains that tolerate salty or slightly saline water, which reduces the use of fresh water, and improves, and protects soil properties. ⁽¹⁵⁾

Saline agriculture improves food security, reduces pressure on potable water, and uses saline areas and water. In addition, it provides new sources of food animal feed, biofuel, and new job opportunities for women and youth.

The International Center for Biosaline Agriculture (ICBA) is one of the most important centers concerned with saline agriculture. Non-profit center for applied agricultural research aims to achieve food and water security, and healthy nutrition. It enhances agricultural productivity and sustainability in saline and marginal environments around the world. The center partnerships find solutions and build capacity to implement and disseminate these solutions. The center was established in 1999 and is hosted by the United Arab Emirates. Since

its establishment, it has implemented research programs in more than 30 countries extending from Gambia in West Africa to Tajikistan in Central Asia, in close collaboration with a large number of national, regional, and international institutions.⁽¹⁶⁾

Zayed International Agricultural and Environmental Research Program (Nahshala Farm):

In 1992, by order of the late Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace, the Zayed International Agricultural and Environmental Research Program was established to promote and develop agricultural and environmental research related to the use of saline water and salt-tolerant plants. Since its establishment, more than 45 different salt-tolerant plants have been introduced and evaluated.

The program's activities and research are conducted at Nahshala Farm, which is located in the desert lands of Nahshala, 24 kilometers east of Sweihan towards Abu Dhabi and 90 kilometers west of Al Ain city. The farm site was selected in 1990 based on the directives of the late Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace, to develop agricultural and environmental research related to the use of saline water sources and salt-tolerant plants.

The total area of the farm is about 15 hectares. The farm consists of two main production systems, the salt-water garden and the integrated multi-agricultural system section that focuses on the production of salt-tolerant fodder.

The UAE also established an integrated system for fish farming, salt-tolerant fodder, and livestock using highly saline water. The project aims to benefit from saline well water and lands affected by salinity that cannot be used within the sustainable and integrated agricultural system to increase animal protein production.⁽¹⁷⁾

Fourth: Hydroponics and Fish Farming

Hydroponics

Hydroponics is an agricultural method that relies on the use of water as the main medium for growing plants without traditional soil. This technology uses a set of methods to provide food and water to plants. Hydroponics can be classified into several types, including the hydroponic system, which relies on providing nutrients to plants within a special growth medium, the permeable agriculture system, which benefits from providing filtration water to plants, and

hydroponic agriculture, which relies on using water as a means of transporting nutrients to plants.⁽¹⁸⁾

Hydroponic agriculture consumes less water than traditional agriculture, as water is effectively recycled in hydroponic systems. The concentration of nutrients in the water can be precisely controlled, leading to healthy plant growth and high productivity. High productivity can also be achieved using less space compared to traditional agriculture, as it does not rely on traditional agricultural land.

Hydroponics may be used in places that are not suitable for traditional agriculture, such as areas with difficult environmental conditions such as deserts or areas with saline lands.⁽¹⁸⁾

The hydroponic system is supportive of traditional agriculture and can achieve sustainable productivity. Hydroponics is also one of the innovative and effective agricultural techniques that can meet the needs of agricultural production in the face of future challenges such as water shortages and climate change.

Many Emirati farms rely on hydroponic technology to produce their crops, and they receive great support from the state, as it realizes the importance of this advanced agricultural method and that the ideal result comes from the right foundation! Therefore, the UAE provides the best options for farmers, including facilitating agricultural loans and equipment and providing the best services near their farms.

The most significant hydroponic companies in the Emirates are the following:

1. Badia Farms

Badia Farms is a group of vertical farms that rely on growing plants on vertical lines following the hydroponic system in the Emirates and in a sterile, pesticide-free, and nutrient-rich environment.

The most prominent crops of Badia Farms include watercress, cabbage, red cabbage, radish, amaranth, and sorrel, in addition to green and red mustard and many other plants. It produces between 200 and 250 kilograms of leafy vegetables per day.

2. Emirates Hydroponic Vegetable Farms

It is an integrated hydroponic farm established in 2005 and it is one of the largest farms in the Emirates, known for managing and producing countless fresh and healthy crops. The farm

uses the hydroponic system in all its advanced forms, from planting seeds to the final harvest process.

Fish farming

Fish farming means the breeding of types of aquatic organisms (fish, crustaceans, shellfish, algae, etc.). Fish farming is developed under human control and controlled conditions and in specific areas in earthen or concrete basins or floating cages.⁽¹⁸⁾

It consists of two types:

Aquaculture in inland waters: through special farms

Aquaculture in salty seawater: inside floating cages

Aquaculture and aquatic life are modern vital activities that play an important role in meeting human needs for marine resources. Interest in fish farming is increasing due to population growth and the decline in natural marine fish resources.

Aquaculture contributes to meeting the increasing demand for fish and marine products. With the rise in global consumption rates, aquaculture constitutes a sustainable source for providing large quantities of fish to meet human food needs. Aquaculture also reduces pressure on natural marine resources, as fish reproduction is stimulated in a closed environment and under the management and supervision of the human element. This contributes to maintaining the balance of ecosystems in Oceans and seas.⁽¹⁸⁾

Aquaculture helps to enhance food security by providing a sustainable and diverse supply of fish. This reduces waste and heavy reliance on wild fish catch, which can be unsustainable sometimes.

The UAE began to be interested in aquaculture forty years ago, specifically in 1984, when the Marine Biology Research Center was established in cooperation with the best international experts in the field of aquaculture. The center conducted many studies and experiments on the production of local fish species to obtain the correct methods that contribute to the propagation of these species, which enhances fish stocks, food security, and the sustainable marine environment.

Since then, fish farming has witnessed rapid growth and received the attention of the UAE.

The UAE established the Sheikh Khalifa Marine Research Center in 2014 equipped with the latest systems and technologies. It has played a pioneering role in developing and encouraging aquaculture technology in the country, with a production capacity of 30 million fish fingerlings annually. The Ministry of Climate Change and Environment is responsible for preparing national programs to raise the production efficiency of registered aquaculture farms and attracting investment in this field through technical guidance to raise capabilities and research that has identified some species that can be farmed according to the local environmental and climatic conditions. The aquaculture farm has closed and open systems. The aquaponics system supports the production of aquatic organisms with vegetative production.⁽¹⁹⁾

The closed system represents 50% of the systems used for aquaculture in the country, which depends on internal ponds, and is distinguished from the open system by the high density in the production unit; in closed ponds, the water specifications are controlled recycled and technologies are used, and high-quality fish feed is used.⁽¹⁹⁾

Fifth: Vertical farming:

Vertical farming is a type of modern agricultural system for producing food in vertically stacked layers, and vertically inclined surfaces with/or integrated into buildings such as (buildings, warehouses, shipping containers, etc.) instead of growing crops on one level, as is the case in fields or greenhouses, which provides larger areas for agriculture. Vertical farming uses modern farming techniques and methods such as controlling light, humidity, temperature, fertilization, etc. Some vertical farms also use modern techniques to increase natural sunlight using metal reflectors, and the method of farming without soil such as hydroponics, and all agricultural techniques and methods that improve plant growth.

Vertical farming is one of the recent innovations, especially since there are many challenges that humans may face due to the steady increase in the world's population, with a shortage of food. Agricultural land is decreased and deteriorated as a result of its unsustainable use, vertical farming can be one of the solutions to this problem.

Vertical farming aims to increase the agricultural area per square meter and reduce the use of natural resources, especially water. Thus, vertical farming can provide a safe life for humanity by providing large quantities of food, which helps bridge the global food gap resulting from population growth.

The UAE is witnessing an increasing trend towards developing vertical farms as a promising

solution that contributes to achieving food security, as these farms use advanced technologies to provide fresh agricultural products throughout the year. The world's largest indoor vertical farm was launched in Abu Dhabi, contributing to the development of sustainable, controlled environmental agriculture and indoor vertical farming to help address the challenges of global agricultural supply chains. The farm aims to conduct scientific research and development in the agricultural sector and develop the next generation of sustainable farming technologies and solutions in arid and desert environments.

Bustanak Farm in Dubai, established by Emirates Flight Catering, a subsidiary of the Emirates Group, is the world's largest vertical farm based on hydroponics. The farm uses advanced technologies including artificial intelligence and advanced applications. It relies on a continuous production cycle that ensures super-fresh products, without the use of any pesticides or chemicals. The farm is equipped with a closed-circuit irrigation system, where water is recycled, which contributes to saving 250 million liters of water annually, compared to traditional outdoor farming that produces the same amount of crops. ⁽²⁰⁾

Livestock in the UAE

The UAE strategically attaches great importance to animal food security. The UAE has significant livestock wealth, with sources estimating the number of camels in the country at around 450,000 heads, while goat and sheep herds are around 5 million heads. The UAE livestock wealth economically represents an important element for food security. The total livestock wealth in the Emirate of Abu Dhabi alone in 2022 is about 3 million, 502 thousand, and 937 heads of sheep, goats, camels, and cows, an increase of about 126 thousand, 455 heads, or 3.7%, over 2021, which was 3 million, 376 thousand, and 482 heads. ⁽²¹⁾⁽²²⁾ The poultry sector in the country is also witnessing rapid growth in meat and eggs.

These sectors have expanded significantly over the past decades due to the support of the state in its various sectors and the consumer's preference for fresh local products. Therefore, the state needs to support this sector for several reasons, the most important of which is providing food security for citizens while ensuring the quality of local products, because the UAE greatly developed quality control processes for all types of products. ⁽²²⁾

The UAE government launched the National Food Security Strategy, which develops a national system of sustainable food production. The strategy identifies the elements of the national food basket, which includes 18 main types, based on three main criteria: the local

consumption of the most important products, the ability of production, and the nutritional needs. The strategy launches several major short- and long-term initiatives, within the vision of 2051. The strategy aims for the UAE to be the best in the world in the Global Food Security Index by 2051. It also aims to develop sustainable local production for the entire value chain and to devote smart technologies to food production.⁽²³⁾

Some of the UAE aspects that reflect the interest in animal food security are:

1. Regulating and monitoring animal production and supporting local production: to ensure quality and obtain high-quality animal products per health and public safety standards.
2. Use of technology and innovation: The UAE seeks to use technology and innovation in animal production, which contributes to improving production efficiency and ensuring the safety of products.
3. Sustainability: The UAE considers sustainability essential to its food security strategy. Sustainable agricultural and pastoral practices are encouraged to ensure the continued provision of these food resources.
4. Monitoring and controlling international trade in animal production: The UAE relies on international trade to meet its food needs. Strict standards are set for imported products to ensure their safety and quality.
5. Investment in research, development, and staff qualification: Investment in research and development in the field of agriculture and livestock is being promoted to improve productivity and provide innovative solutions to food security challenges.

Climate change and food security

Climate change is a global issue, due to its wide-ranging effects, such as changes in temperatures, rainfall rates, and weather patterns, which threaten global food production, in addition to rising sea levels and oceans, which leads to an increased risk of flooding, which in turn negatively affects natural and environmental systems, water resources, and biodiversity.

Climate change will lead to a decrease in the productivity of major crops due to the following factors:

- Rising temperatures and the expected shortage of available water resources, will affect crop productivity.
- Increased salinity of many agricultural lands will lead to a decline in the area and productivity of agricultural lands.
- Rising temperatures will lead to an increase in insects and diseases that cause damage to crops.

This will result in a decrease in agricultural production, an increase in unemployment in the agricultural sector, and an increase in food prices. However, with the adoption of innovative agricultural methods such as the use of artificial intelligence, vertical farming, sustainable production systems, and a focus on local plants, all of this will constitute a driving force towards greater efficiency in production despite the scarcity of agricultural resources in addition to the population increase.

There is an expected increase in the world population to more than 8.5 billion in 2030, and to increase to one billion people by 2050, then reaching 10.4 billion people by 2100, and at the same time, there is an expected decline in the agricultural area responsible for food production.

Therefore, it is necessary for international serious and continuous efforts to reduce the factors and causes that contribute to climate change. It can provide financial support to poor countries to adopt modern and sustainable technologies in the fields of industrial and agricultural production and promulgate related laws and regulations. It can also exploit and provide modern technology in agriculture, such as vertical farming and smart agriculture, and relying on local breeds and improving post-harvest processes, and agricultural productivity. Many countries in the world have taken serious measures to enhance investment in the agricultural sector, especially during the Corona pandemic, which has greatly affected food production. These efforts will play a crucial role in enhancing food security and responding to future challenges.

The United Arab Emirates is striving hard and diligently to enhance food security and address climate challenges. The country has made significant expansion in the field of increasing agricultural production, while at the same time paying special attention to preserving natural resources and reducing harmful effects on the climate. This includes adopting sustainable agricultural practices and using modern technology to enhance production efficiency and achieve environmental balance.

These efforts demonstrate that the UAE is strongly committed to achieving sustainable development, ensuring sustainable economic growth, and protecting the environment. In addition to improving food security, the UAE focuses on integrating efforts between agriculture and environmental conservation, to achieve comprehensive and sustainable progress in all economic and environmental aspects. The most important efforts made to achieve this include:

- Focusing on the use of local plants, their propagation, and preservation.
- Reusing treated water in agricultural production.
- Climate-smart and sustainable agriculture and vertical farming.

- Fish farming.
- Water harvesting studies and the optimal use of natural resources, especially water.
- Expanding the use of renewable energy in agricultural production.

The UAE has clear strategic visions and a roadmap to make comprehensive qualitative achievements in various vital sectors. These visions reflect the UAE leadership's future vision and dedication to achieving sustainable prosperity and creating a strong and sustainable future for current and future generations. The UAE's efforts are not limited to the national and regional levels, but also make remarkable contributions to the international arena, as it has become one of the leading countries in the world and leads international efforts in combating climate change.

The UAE vision seeks to achieve advanced positions in the field of food security, this goal highlights its commitment to sustainability and economic and social progress. The UAE government and private sectors seek to enhance its stability in the international arena and maintain its excellence in the field of food security.

The UAE and USA officially launched, during the 26th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 26), the Agricultural Innovation for Climate Initiative (AIM4C). It is a new revolution in the agricultural sector, reducing greenhouse gas emissions by up to a quarter in the world. It protects the agricultural sector, as it is one of the most vulnerable to the effects of climate change pursuits to achieve three main goals over the next five years. They significantly increase investment and spending on innovation, research, and development in agricultural technology initiatives. They enhance food and water security, reduce emissions from agriculture, and provide new climate-friendly industries. The initiative, with its goal of investing in innovation and research and development in the agricultural sector, is based on 5 areas: sustainable improvements in productivity, efficient use of land, water, and other resources, flexible production of crops and livestock, development of digital tools, and comprehensive, fair and sustainable food systems.
(24)

The hosting of the COP28 conference also represented a great opportunity for the UAE, the region, and the world to find practical solutions to reduce emissions, transition to clean energy, and sustainability in various lines of production. It also highlighted the UAE's role in building bridges of dialogue and cooperation and advancing global efforts to ensure the provision of climate finance to developing countries.

The Conference of the Parties also provided a global platform for mobilizing international efforts through negotiation and agreement on commitments to mitigate the effects of climate change.

The UAE's efforts to achieve food security

The UAE government launched the National Food Security Strategy in November 2018. The strategy aims to develop a comprehensive national system enabling sustainable food production and identify the elements of the national food basket, which includes 18 main types, based on three criteria:⁽²⁵⁾

- Local consumption of the most important products
- The ability to produce and manufacture
- Nutritional needs

The strategy includes 38 major short and long-term initiatives, within the 2051 vision and the 2021 work agenda, through strategic directions that focus on:

- Facilitating global food trade
- Diversifying food import sources
- Identifying alternative supply plans, including three to five sources for each main food item

Among the most prominent objectives of the National Food Security Strategy are:

- For the UAE to be the best in the world in the Global Food Security Index by 2051, and among the top 10 countries by 2021.
- Developing sustainable local production, and devoting smart technologies to food production.
- Activating initiatives to enhance research and development capabilities in the field of food.
- Developing a program concerned with aquaculture.
- Facilitating procedures within the agricultural production, agricultural contracting procedures, and financing systems for agricultural and food activities.
- Aligning local agricultural fees with international counterparts to improve local production.
- Encouraging the consumption of fresh local products.
- Reducing food loss and waste by developing an integrated system to reduce food waste within supply chains.
- Establishing multiple food banks across the country.
- Ensuring food safety and improving nutrition systems.

- Conducting training programs about national food safety and prevention in the field of food trade.

The UAE University's role in sustainable development and food security

The UAE University- College of Agriculture and Veterinary Medicine students participate effectively in all local and international events and activities of sustainability, environment, climate, water, and food security. The college is keenly interested in environmental conservation, biodiversity, and sustainability. It focuses on exploiting natural resources effectively and sustainably without adversely affecting climate elements. The college's students play a vital role in food security. The college offers academic programs in crop production, animal production, fish production, agricultural management, food sciences, and veterinary medicine.

The college is dedicated to finding solutions to global issues effectively and contributing to sustainable development. Additionally, college students are actively interested in achieving sustainable development and preserving the environment.

The UAE University plays a leading role in the fields of scientific research and innovation through its pioneering environmental projects. The university's environmental project is an innovative initiative that provides an environment that simulates diverse climatic conditions to test and study effects on plants. Therefore, the researchers and students conduct effective experiments, analyze plant-related conditions, and produce scientific papers.

In addition, qualitative projects such as experimental stations and the Zayed International Salinity Program enhance research and development in the fields of agriculture and water resources.

The Abu Dhabi new strategy represents a future roadmap to establish sustainable food systems and address the agricultural challenges. It increases the rate of agricultural sustainability to 66%, compared to 46% currently, and reduces the use of groundwater in agriculture by about 500 million cubic meters between 2022 and 2025. The strategy has effective partnerships with agriculture and food production institutions. To achieve these goals, the strategy has identified several initiatives for consolidation of reliance on technology and artificial intelligence, and capabilities of the agricultural sector based on the principles of research and development, governance, and excellence. It is diversified and integrated to ensure food security based on the values of flexibility, professionalism, and efficiency. The strategy enables sustainable agricultural development, modernizes agricultural systems, improves farm productivity, and

encourages farmers to adopt the best practices and principles of agricultural sustainability.⁽²⁶⁾

The UAE University Techniques

1. Tissue Culture Lab

The UAE University-Plant Tissue Culture Lab contributes to the production of many palm varieties, using advanced technology for palm propagation by plant tissue culture.

The UAE community in particular and the region in general attach environmental, economic, and social importance to palms. The Palm Tissue Culture Lab was established in 1989 to propagate palm seedlings from the varieties specific to the UAE and other distinguished varieties. The lab selects different palm varieties by cultivating plant tissues in special nutritional media within a sterile environment. Since its establishment, it has relied on Organogenesis as a basic technique. There are stages for cultivating palm tissue using Organogenesis.

In the first stage, the tissue is isolated and cultivated and the tissue that generates the buds is produced. The pulp or core is isolated and sterilized, then cut into small parts, each of which is placed in a container with a suitable nutritional medium to produce the generative tissue or buds. From the beginning of its cultivation, the tissue needs a period of time that may reach two years, depending on the variety, until the buds begin to form, during which the nutritional medium is renewed every month.

In the second stage, the buds are formed and multiplied, starting with the beginning of the appearance of the buds, which are transferred to a special hostile medium that helps develop and multiply their number. In this stage, several thousand buds are also produced that match the mother variety to be multiplied. The buds are selected for a period of up to 3 years, During this period the buds are monthly transferred to a new nutritional medium.

In the third stage, the elongation stage, the buds are placed in another hostile medium that stimulates the buds to elongate, the origin of the plant's vegetative organs, without forming roots. The buds remain in this stage for one to two months and then reach an appropriate length ranging between 10 - 12 cm.

In the fourth and final stage, the root formation stage, the buds are transferred from the elongation stage to a suitable nutritional medium that stimulates root formation and remains in it for one to two months. The buds become complete seedlings containing a strong root system.

Then, the complete seedlings are transferred to greenhouses to enter the hardening program.

The palm seedlings produced as dates in the tissue culture lab are subjected to a hardening program in the nurseries that includes three stages, each stage has a special program in terms of soil components, irrigation, and fertilization, and the seedlings are cared for a period of no less than approximately months in each stage.

So far, the lab has produced about one million palm trees of about 65 different varieties, including 5 palms. The lab has bred a rare palm known as the Al Ain palm. This type is characterized by abundant production and a high percentage of pollen grains of up to 97.5% compared to 75% in other palms.

2. The tissue culture lab working technique

The palm tissue culture lab uses the organ-disclosure technique as a basic method for propagating different palm varieties.

This method ensures that the palm varieties produced match the parent variety to be propagated. This technique depends on the creation and formation of the tissue that generates the buds as the first stage, and then the buds are multiplied without going through severe cell division (calcification). ⁽²⁷⁾

The plant tissue culture-produced palm seedlings are:

1. Completely free of diseases and insects.
2. The success rate of planting in the field reaches 100% without loss or damage.
3. Fast-growing, early fruiting, and abundant production.
4. Easy to plant by anyone, at any time of the year.
5. Does not require a large amount of water.
6. Easy to transport seedlings from one place to another due to their small size and lightweight.

The production process goes through the following stages:

1. Pre-planting tissue seedlings stage.
2. The process of planting seedlings.
3. Protecting and caring for seedlings after planting.

3. The UAE University National Water Center

The National Water Center is a multidisciplinary research and consulting center established

by the UAE University in 2012 in response to the strategic needs of the UAE and the region. The scope of the National Water Center includes the assessment, development, management, and sustainability of water resources. The resources include groundwater and surface water, desalinated water, and (treated) wastewater.

Quantitatively and qualitatively, the National Water Center provides high-impact research and innovative practical solutions to water-related challenges across the UAE and beyond. The center addresses the UAE's growing water needs, enhances the water resources (especially in arid and semi-arid regions), and informs the water decision-makers at the local and national levels. The center finds science-based solutions through applied research, advisory services, capacity-building workshops, and collaboration with water authorities, agencies, and relevant institutions.⁽²⁷⁾

The National Water Center established the consortium, which consists of researchers and experts from various fields: such as water resources, geology, hydrology, environmental sciences, numerical modeling, geographic information systems, and remote sensing. The consortium includes members of the National Water Center, faculty members from different colleges at the UAE University, professionals and experts in the field, and other well-known international universities and research centers faculty members, researchers, and regional and international experts.

The National Water Center focuses on the following important areas:

1. Integrated water management.
2. Groundwater and surface water modeling.
3. Rainfall assessment.
4. Remote sensing applications in hydrology and natural resource management.
5. Seawater desalination (reverse osmosis and thermal)
6. Storage and recovery of the aquifer.
7. Wastewater treatment and recycling.
8. Water quality and pollution.
9. Water delivery and sustainable domestic water supply (design and implementation)
10. Climate Change Impacts.
11. Adaptation and Mitigation.
12. Precision Irrigation Management.
13. Food, Water, and Energy.

14. Data Modeling Based on Surface and Groundwater Resources.
15. Water Use Efficiency.
16. Social, Economic, and Environmental Communication of Water Resources.

4. Khalifa Center and its Achievements in Sustainable Development in the United Arab Emirates

Since its inception, the UAE University has enhanced its research capabilities by establishing research centers in line with the country's strategies and priorities and global trends in scientific research and development.

The Khalifa Center for Genetic Engineering and Biotechnology is an important research center. The center seeks to become a distinguished center for research related to plant genome sciences to develop a sustainable economy. The research directions focus on developing agriculture in the UAE by taking advantage of plant genetic systems, producing and modifying plants with agricultural and economic traits, developing crop production, achieving food security, discovering the principles of plants' response to environmental pressures, and developing plants through genetic modification and editing, with traits of high economic value.

The center discovers the mechanisms that desert plants rely on to withstand environmental conditions. The generated knowledge is used to genetically modify plants and improve their ability to produce plants in the desert environment. It also develops plants with other traits with high economic values, such as the high sugar content in palm trees and their seedless fruits.

The center developed three research platforms, including genetic engineering, genomics, and applied research, which form the basis of research and development. The vast genome and gene expression data provided unlimited opportunities for scientists to develop agriculture positively.⁽²⁸⁾

The Khalifa Center also focuses on developing crops with desirable agricultural traits to increase the economic value of crops produced in the country. Accordingly, the Center has developed three research platforms:

1. Genetic engineering to improve agricultural crops.
2. Genomics and bioinformatics.
3. Applied research to improve crops.

The Center also has the following facilities and resources:

1. Tissue culture lab
2. Plant growth facilities
3. Molecular biology lab
4. Bioinformatics lab
5. Imaging rooms

Artificial intelligence in agriculture

Artificial intelligence is the field of computer science dedicated to solving cognitive problems usually associated with human intelligence, such as learning, creativity, and image recognition.

Artificial intelligence provides many solutions and advantages for various agricultural operations, including information that interests farmers regarding seed selection, identifying the best crops suitable for soil conditions, predicting the types of required pesticides, optimizing fertilizer use, and reducing environmental impact.

The UAE uses AI and processes data from different sources, such as sensors embedded in the soil, and remote inputs, such as satellite images or even mobile phones. The UAE also uses image recognition algorithms, AI can examine images, identify disease or insect infestations, or scan seeds to determine type, quality, and viability. The ability to distinguish between viable and unviable seeds improves agricultural efficiency and may lead to improved crop yields and resource conservation. ⁽²⁹⁾

In precision agriculture, AI can automate the planting process and vision systems that identify optimal locations for planting seeds. In using AI-powered drone applications, crops can be photographed and evaluated, and fertilizers can be accurately distributed. ⁽²⁹⁾

The UAE University- College of Agriculture and Veterinary Medicine conducted an experiment and pollinated palm trees using drones. The results showed that this technology had significant advantages that led to increased effectiveness of the pollination process and reduced effort and time. ⁽³⁰⁾

The Environment Agency - Abu Dhabi is the first institution to plant mangrove trees on a large scale using environmental principles enhanced by drone technology. This method of planting mangrove trees is innovative and relatively new. The planting of one million seeds

follows the success of the initial trial conducted with Engie, a company providing low-carbon energy services, and Destins Imagery, a company specializing in drone engineering solutions. This phase included planting mangrove trees using drones in 2020, with a success rate of 48 percent. The UAE then expanded the project and planted one million seeds in Marfa in the Al Dhafra region.⁽³¹⁾

The use of drones to plant mangrove trees is a method with many advantages; due to the low environmental footprint of this methodology, it reduces the number of people involved in planting and eliminates the need to transport seedlings. It is also a cost-effective method; as it reduces the overall cost of planting mangroves, and establishes mangrove nurseries and the associated costs. In addition, it is facilitating access to remote and difficult areas. The project also includes implementing an experiment to integrate machine learning during future monitoring stages.⁽³¹⁾

Artificial intelligence can facilitate the transition from traditional farming operations to precision farming, increase yield, use resources efficiently, save effort and time, and reduce the use of labor and human intervention.

Water security and food security

Water security achieves a balance in quantity, quality, time, and place between available water resources and various water needs in the present and future. This means that the state of water security for any country, in any given period of time, is a function of the water balance of this country and a direct reflection of it. The water balance has three states: state of water balance, the state of water surplus, and the state of water deficit.⁽³²⁾

The UAE has a desert and semi-desert climate and low rainfall, which does not exceed 100 mm/year. It is noticeable that the demand for water for agricultural, industrial, domestic, and other purposes is increasing, which has created a state of imbalance between the demand for water and the available and renewable water. In particular, more than 75% of the available water is used for agricultural purposes. As a result of the increase in cultivated areas, the lack of rationalization in water consumption and the overuse of groundwater resources led to the depletion of stored water and disruption of demand and availability levels.⁽³³⁾

The UAE in particular and the GCC countries in general face a difficult challenge in providing water, so the UAE had to increase its reliance on seawater desalination as a primary source for providing drinking water. The UAE also uses renewable and alternative energy sources

to mitigate the negative environmental impacts. It achieves a balance of water security and food security by adopting an agricultural policy. The water use is rationalized in irrigation patterns and modern agricultural systems such as organic farming and hydroponics encouraging the cultivation of varieties resistant to salinity and drought. The UAE also expands dam construction and water harvesting projects to enhance groundwater reserves and groundwater resources. The UAE also develops projects using industrial recharge technology and desalinated seawater recovery in appropriate groundwater reservoirs as a strategic reserve for reuse in emergencies.

(34)

The UAE water security's exceptional priority sends positive signals for the future. This priority is not limited only to high-level and continuous attention and allocating a period to address the repercussions of the current water situation in the country but also focuses primarily on how to confront this challenge in the future through scientific planning and developing strategies. It can also develop thoughtful solutions that ensure avoiding the negatives of the current water situation and its negative repercussions on future generations. The UAE water security is one of the sustainable development issues.

The UAE Water Security Strategy 2036

The UAE Water Security Strategy 2036 aims to promote the sustainability and continuity of water during normal conditions and extreme emergency conditions. The strategy targets are to reduce the total demand for water resources by 21%, increase the water productivity index to \$110 per cubic meter, reduce the water scarcity index by 3 points, increase the reuse of treated water to 95%, and provide storage capacity for normal cases in the water system.⁽³⁵⁾

Irrigated agriculture is the main consumer of water, with an average water consumption of about 60% of total water use, of which 39% is used for productive agriculture, 11% is used for greening and designed landscaping, and 10% for forestry. Municipalities use 40% of total water consumption for domestic and industrial purposes. Irrigation water is usually used wastefully, mainly using traditional irrigation techniques such as flood and furrow irrigation, and for growing low-value and high-water-consuming crops, without taking into account the implicit economic cost of using potable water and urban/industrial purposes.^(36,37)

Water availability is a critical factor for agricultural production and irrigation is essential for crop production, especially in arid and semi-arid regions. Water scarcity can lead to low crop yields, affecting food production and security. Freshwater is becoming scarcer than ever, due to many factors, most notably climate change. Innovative solutions must address water

scarcity and its declining use in agriculture, such as sustainable water management, efficient irrigation techniques, optimal use of non-conventional water resources such as saline water and treated wastewater, focusing on local plants that are tolerant to drought and salinity, and shifting from traditional farming patterns to climate-smart agriculture.

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Chapter 8

Community Health

Dr. Rami Abdulhamid Baraym

Introduction

Since the establishment of the UAE on December 2, 1971, the state has focused on the human being as the main goal of development. The state has paid great attention to developing infrastructure, public services, health, education, and other areas that contribute to improving the quality of life of individuals, meeting their basic needs, and promoting comprehensive and sustainable development. The late Sheikh Zayed bin Sultan Al Nahyan, the founder of the UAE - may his soul rest in peace, prioritized the healthcare services. He followed up on all the health-related projects at the state level since its establishment. He said, "Our people have been deprived in the past of many services and facilities that others enjoyed, and it is time for our people to compensate for what they have missed so that they can enjoy what God has given us of goodness." Health services have amazingly developed in record time. As a result, the UAE successfully provides health and prevention services to all segments of society.⁽¹⁾



Sheikh Zayed visit to Al Jazeera Hospital at 1970s (currently Sheikh Khalifa Hospital)

Sheikh Zayed bin Sultan - may his soul rest in peace - made many humanitarian achievements, provided the UAE people with generous and continuous health support, and harnessed all available capabilities to provide advanced health services to all regions including villages and remote areas. The UAE established government and private hospitals to provide health care, which resulted in reducing the rates of neonatal mortality and increasing interest in motherhood and childhood. The Ministry of Health also strived to provide health services



conveniently, using the latest diagnosis, treatment, and prevention to keep pace with global developments and implement the directives of the late Sheikh Zayed bin Sultan Al Nahyan. As a result, the UAE succeeded in reducing childhood diseases and eradicating many diseases, including polio, tetanus, and other prevalent diseases at that time.



He also ordered the establishment of universities that teach medicine and health sciences. The College of Medicine and Health Sciences was opened at the UAE University in 1984, and other universities such as Mohammed Bin Rashid University of Medicine and Health Sciences, Ras Al Khaimah University of Medicine and Health Sciences, College of Medicine, University of Sharjah, Dubai Medical College for Girls, and others.⁽²⁾



His Highness Sheikh Mohammed bin Zayed Al Nahyan, President of the State - may God protect him - continued to adopt this approach. The health system in the UAE has become in line with global systems due to the forward-looking vision of the health sector and the interest in community health. The late Sheikh Zayed bin Sultan and Sheikh Khalifa Bin Zayed Al Nahyan made the UAE a leading global center in medicine. His Highness Sheikh Mohammed bin Zayed Al Nahyan - may God protect him - built an advanced network of modern international hospitals and model health centers that provide diagnostic, therapeutic, and preventive health services according to international standards to the UAE citizens and residents.

He said on World Health Day, on April 7 of each year: "The efficiency of the health system is a basic criterion for the growth of countries and the progress of their societies. On the occasion of World Health Day, we affirm that health will remain at the top of our priorities to

achieve sustainable development, and we will continue to work with our partners to confront diseases and epidemics in the world.”

In this chapter, the spotlight will be on community health in the United Arab Emirates, the challenges it faces and the efforts made to enhance it, and some common topics in the field of community health in the UAE will be addressed in some detail.

Health Challenges in the UAE and Leadership Efforts

Health is one of the most important issues in the development field because it stands out as one of the indicators of sustainable development. Accordingly, the UAE has prioritized the community healthcare sector. From this standpoint, the health services sector has witnessed significant growth in line with the renewed health challenges.

The UAE faces health challenges similar to those faced by many other countries. However, there are some unique challenges it faces based on its demographic and economic nature, as cases of chronic diseases such as heart disease, diabetes, obesity, and respiratory diseases are increasing in the UAE, which is partly attributed to changes in lifestyles and nutrition.

Non-communicable diseases pose a health challenge in the UAE. The country implements a number of efforts and initiatives to promote community health and improve the quality of healthcare. Among these initiatives are establishing preventive aspects to reduce the rate of lifestyle diseases to achieve a healthy life, long life, and better quality of life.

Health system in the UAE

The Ministry of Health and Prevention is the federal health authority responsible for providing comprehensive health care to all UAE citizens and residents, through its preventive and curative services in all emirates of the country. It is responsible for developing the readiness of the health system to deal with pandemics and health risks.

The Ministry of Health has launched a number of initiatives and projects to promote public health in the community, through comprehensive and innovative health services, and launched campaigns to promote health awareness within the community.

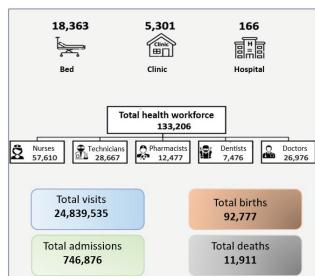
The Ministry of Health builds hospitals equipped with the latest medical devices and equipment nationwide. It also employs highly qualified and experienced medical personnel.

The Ministry also develops health information systems and provides regulatory and supervisory services to the health sector.⁽³⁾

In addition, the UAE established Emirates Health Services to enhance the efficiency of the federal health sector. It aims to implement the Ministry of Health's strategic policies and standards and propose legislation related to the development of the health sector at the national level. It also provides health care and treatment services, takes preventive measures, and combats epidemics and diseases.⁽⁴⁾

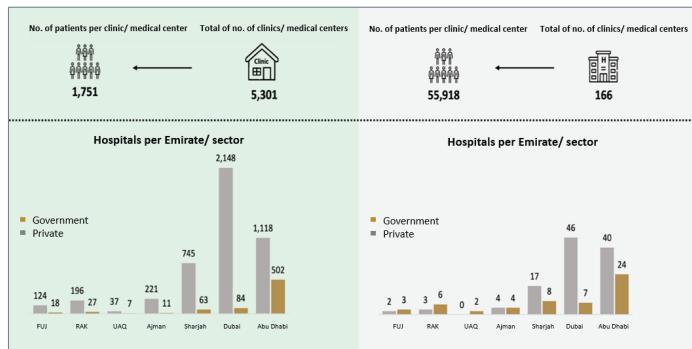
The UAE's different emirates established health authorities to provide local health services. In the Emirate of Abu Dhabi, the Department of Health represents the regulatory body for the health system in the emirate and is responsible for reviewing laws, implementing standards, and encouraging the provision of world-class services. In the Emirate of Dubai, these tasks are managed by the Dubai Health Authority, and in the Emirate of Sharjah, the Sharjah Health Authority.⁽⁵⁾

The UAE health entities provide combined health care, improve the quality of services, and ensure access to health care in all local regions. According to the Ministry of Health's latest statistics in 2021, the number of hospitals reached 166 hospitals in addition to 5,301 health centers spread across all the UAE regions. The capacity reached more than 18,000 beds, at a rate of 1.98 beds per thousand patients. The following shows some statistics related to this matter.⁽⁶⁾



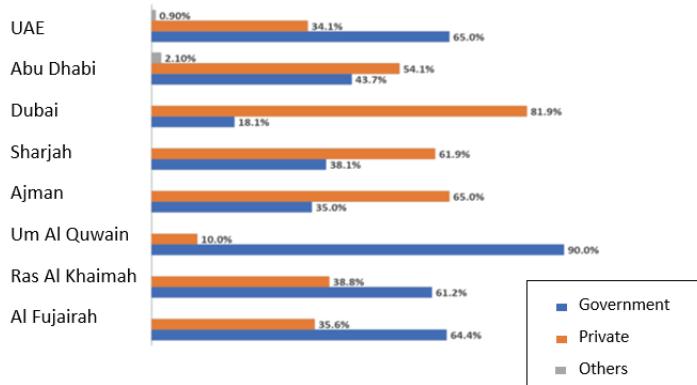
UAE Health system

Ministry of Health and Prevention 2021

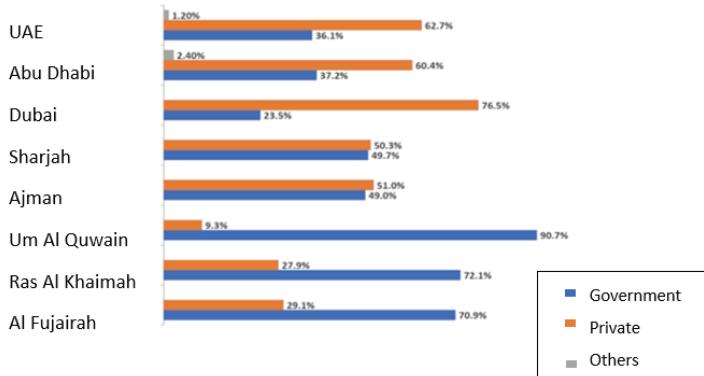


Ministry of Health and Prevention 2021

Doctors in UAE



Nurses in UAE

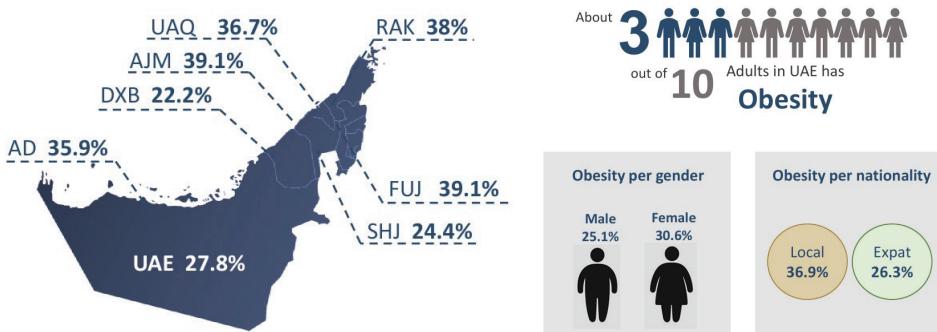


Ministry of Health and Prevention 2021

UAE efforts to combat non-communicable and communicable diseases

Diabetes

Diabetes is one of the widespread health problems in the UAE, and is a challenge due to the high rates of cases in recent years, as the percentage of patients with diabetes reached 11.8% in 2021. The danger of diabetes lies in the associated complications, such as cardiovascular diseases, kidney and eye diseases, and others. Diabetes is related to several factors, including an unhealthy lifestyle, an unbalanced diet, a heavy reliance on foods rich in sugars and saturated fats, and lack of movement, which resulted in high rates of obesity, reaching 27.8% in the latest statistics in 2023.⁽⁷⁾



Ministry of Health and Prevention - Obesity study 2021

In this regard, in the endeavor of the leadership to provide a decent life for all, the UAE has taken many measures, such as including diabetes in broader health policies and programs related to non-communicable diseases, and integrating disease management into many national strategies such as the National Nutrition Strategy 2030 and the National Wellbeing Strategy 2031.⁽⁸⁾

The UAE adopted the National Wellbeing Strategy 2031 in 2019, which aims to establish the foundations of a new way of thinking in government work in the UAE, as it focuses on quality of life and adopts a comprehensive perspective to enhance the quality of life of individuals throughout their lives.

The National Wellbeing Strategy includes 90 initiatives implemented by government agencies to advance vital sectors that affect people's lives. It will have a positive impact on the

individual and society in the areas of physical and psychological health and other areas. The strategy builds its orientations on 14 main themes covered by the three levels of the National Agenda for Wellbeing. It focuses at the advanced state level on five themes, including achieving a prosperous economy and establishing an efficient and effective government in the fields of educational, health, and social services, security, safety, and the rule of law. It also promotes flexibility, reliability, quality, efficiency, and transparency in government work. It creates vibrant cities and communities that enhance liveability, establishes a sustainable lifestyle that sustains national resources, and supports a diverse and vibrant national culture by organizing cultural and recreational events and activities, preserving national identity and cultural diversity, and stimulating community communication.⁽⁹⁾

The UAE launched the National Nutrition Strategy 2030 in 2022 to establish sustainable nutritional systems, provide safe and supportive nutrition environments, and enhance food governance. The strategy ensures the health of generations, achieves food security, and raises the sustainable quality of life.

The strategy's five directions include 1- sustainable and resilient food systems, 2- comprehensive basic nutrition measures, 3- social protection and nutrition education, 4- safe and supportive nutritional environments, and 5- advanced nutrition strategy.⁽¹⁰⁾

The health authorities develop medical treatment and prevention methods using artificial intelligence technologies, telemedicine, and other therapeutic programs. The Ministry of Health also implemented several initiatives and programs, including the Early Diagnosis Program for Diabetes. The main elements include screening those most at risk and educating health professionals to improve community health.

The New York University Abu Dhabi conducted the UAE health research, a long-term study in 2018, and it is one of the most important scientific studies with the participation of various government institutions, entities, and hospitals. The study collects samples and scientific data from Emirati citizens aged 18 and above to study and identify the environmental and genetic factors of diabetes, cardiovascular diseases, and cancer. The study will play an important role in developing the prevention and treatment of chronic diseases, diabetes, and heart disease.⁽¹¹⁾

The UAE leadership also invited international institutions such as Imperial College London, in addition to local diabetes institutions, and provided the latest medicines and therapeutic technologies in this field.

Genetic Disorders and the UAE Genome Program

According to health reports in 2012, 75 out of 1000 children born in the UAE suffer from birth defects, most of which are due to genetic causes. News reports in 2013 included estimates issued by the UAE Genetic Diseases Association about the possibility of more than 400 genetic diseases in the country. It indicated that genetic disorders are the fourth leading cause of death, as the country ranked sixth among 193 countries in terms of the rate of birth defects, which are mainly due to genetic causes, as most researchers believe that marriage between relatives is the main cause of genetic disorders.⁽¹²⁾

The UAE leadership has adopted the National Genome Strategy launched in 2023. The UAE Genome Council oversees all genome programs and projects, which are being developed and implemented in cooperation with various stakeholders. It greatly supports the efficiency of the healthcare sector in the country, through preventive medicine programs that focus on the genetic risk register and precision medicine programs that target genetic and rare diseases.⁽¹³⁾

This strategy aims to establish integrated frameworks and systems for developing and implementing genome programs. It will develop personalized healthcare and precision medicine programs based on an Emirati genetic reference to reduce the spread of genetic and chronic disorders. The strategy has five main themes: 1) establishing a flexible and integrated legislative system and governance frameworks, 2) developing a unified and secure infrastructure for genetic data, 3) developing research and innovation capabilities and competencies in genomics sciences, 4) focusing on priority genomic applications for public health, and 5) consolidating partnerships and cooperation in the fields and sciences of genomics.

The UAE Genome Program is one of the most comprehensive population genetic programs worldwide. The collected and analyzed genetic data will develop significant personal and preventive healthcare programs in cooperation with medical and research institutions. The program aims to use and analyze the genetic data of UAE citizens to improve community health.

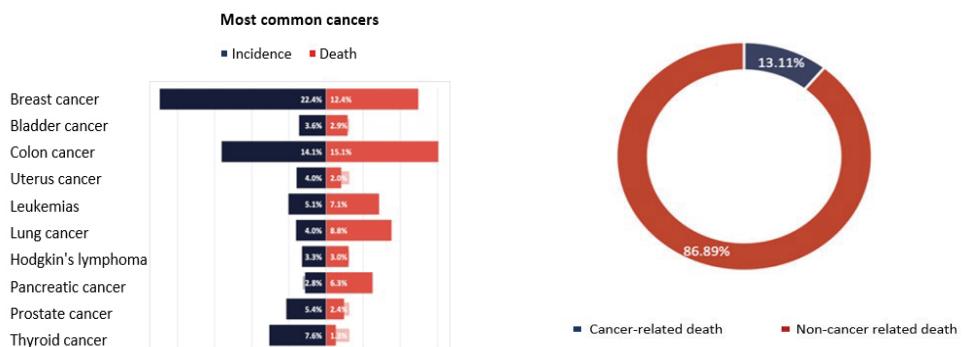
The program uses sequencing technology to create a genome database, as part of clinical care, to enhance the prevention of genetic and chronic diseases such as obesity, diabetes, high blood pressure, cancer, and asthma. It also provides personalized treatment for each patient according to genetic factors. The genetic sciences, modern innovative techniques, and genetic profiling and sequencing identify the genetic fingerprint.⁽¹⁴⁾

The program develops a comprehensive map of the genetic data of UAE citizens, provides a special reference genome, and integrates genetic data with the database of healthcare management. The program uses the latest DNA sequencing technologies, and benefits from the analytical artificial intelligence technology, which helps develop proactive plans to treat and prevent genetic disorders. It can also increase the effectiveness and impact of drugs used to treat various diseases, by choosing the most effective drug, according to the patient's genetic map. The program's results will develop new treatments and tests, enabling healthcare to provide several options for diagnosis and medical treatment. The UAE established customized and preventive programs designed according to the individual's genetics. ⁽¹⁵⁾

Cancer Diseases

The UAE Cabinet established a population registry, which is the UAE national cancer registry. This registry is used to collect, store, summarize, and analyze information on patients with cancer in the UAE. This data is used to improve cancer care, develop scientific research, and expand screening programs. The annual report is published according to this registry and per international standards. Despite the increase in life expectancy of the population in the UAE, cancer is the third leading cause of death in the country after accidents, injuries, and cardiovascular diseases. ⁽¹⁶⁾

According to the Ministry of Health statistics, the most common type of cancer is breast cancer, and the death rate from cancer reached 13.11% of total deaths. ⁽¹⁷⁾



Ministry of Health and Prevention 2023

Cancer Prevention

Under the guidance of the leadership to promote cancer prevention, the Ministry of Health launched national programs for early detection of cancer, such as the Breast Cancer Program in 1996 recognized by the World Health Organization.

The Department of Health in Abu Dhabi recommends regular screening for some types of cancer, which helps detect changes in cells before they become cancerous. Various initiatives are being carried out to detect cancer and raise awareness throughout the country, such as the Pink Caravan event in the Emirate of Abu Dhabi, which is used to raise awareness of breast cancer and encourage screening.⁽¹⁸⁾

The Department of Health in Abu Dhabi recommends regular screening for some types of cancer, which helps early detect changes in cells, as follows:⁽¹⁹⁾

| Cancer type | Target | Diagnosis type |
|-------------------|--------------------------------|---|
| Colorectal cancer | Men and women 40 – 75 years | Colonoscopy every 10 years or stool analysis - every 2 years |
| Breast cancer | Women 40 years and above | Mammogram |
| Cervical cancer | Women 25 – 65 years | Pap smear |

Mental and Psychological Health

Mental health refers to the psychological, social, and emotional state of an individual, and is one of the important indicators of quality of life and a person's ability to adapt to daily challenges and stresses. In addition, mental health helps enhance overall performance and the ability to communicate and create and maintain healthy social relationships. Mental health also prevents mental and psychological illnesses such as stress, anxiety, depression, and sleep disorders.

The UAE is witnessing an increase in mental health problems such as anxiety and depression, which can be partly due to the pressures of modern life and the tensions from social and economic transformations. One of the most prominent challenges regarding mental

and psychological health is the lack of awareness, as many people find it difficult to recognize and understand the symptoms and problems of mental health correctly. The social stigma of mental illness is also one of the challenges facing societies, which prevents many from seeking the necessary help and support.⁽²⁰⁾

The UAE has given great importance to community mental health through qualitative measures, policies, and initiatives. A psychologically healthy society is capable of fully implementing development projects. The support and assistance programs maintain the mental health of community members. It is clearly evident that the mental health facilities reached 167 in 2022.⁽²¹⁾

In this regard, the UAE government issued a federal law in 2023 that keeps pace with modern trends and concepts in the field of mental health. It preserves the rights of the patient and ensures the provision of the necessary health care according to the best standards in force in this field. It also reduces the negative effects of mental disorders on the lives of individuals, families, and society, and enhances the integration of the mentally ill into society.⁽²²⁾

In 2022, the UAE launched the National Policy for the Promotion of Mental Health. The policy identified the strategic objectives that include enhancing the effectiveness of leading aspects of mental health, developing mental health services, and meeting the needs of society. The objectives also include cooperating with various sectors to promote mental health and enhance the prevention of mental disorders.⁽²³⁾

Women's Health and the Role of the Mother of the Emirates

The UAE leadership vision promotes women's health as an essential element and believes in the pivotal role of women in preparing generations capable of continuing progress and leadership and participating in developing the nation. Her Highness Sheikha Fatima bint Mubarak (Mother of the Emirates), Chair of the General Women's Council, the Supreme Council for Motherhood and Childhood, and the Family Development Foundation launched the National Policy for Empowerment of Emirati Women for 2023-2031. Her Highness's vision seeks to achieve fair and comprehensive women's participation to influence all fields and enhance the quality of life in society, to provide a general, reference and guiding framework for decision-makers in federal and local government institutions and the private sector.⁽²⁴⁾

The directions of the National Policy for Empowerment of Emirati Women for 2023-2031 included creating a cohesive family supportive of enhancing the role of women in society.

The strategy ensures access to community support networks for women's challenges and life requirements. It also provides services related to life needs reliably and safely. It takes into account the privacy of women and their families, enhances women's mental health in the face of societal changes, and enables access to therapeutic, advisory, and psychological rehabilitation services. It develops preventive and therapeutic health programs for women that meet their current and expected needs. It also builds public and private sports facilities consistent with women's interests in sports taking into account women's needs and privacy. In addition, it establishes and supports centers that provide services to protect abused women and children.

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The Ministry of Health develops mechanisms to implement the strategy's objectives, including ensuring access to secure health services and care that enhance the advancement of women's health and care for women's health needs in remote areas. It also includes strengthening health education and awareness programs directed at women at different ages and in all local regions and developing programs that enhance women's mental health at all ages. ⁽²⁶⁾

In early 2024, His Highness Sheikh Khalid bin Mohammed bin Zayed approved the establishment of a medical city for women and children. It will include Sheikh Khalifa Medical City as a center of excellence in pediatric medicine, the new Corniche Hospital for Women's and Newborn Health, a rehabilitation hospital, and a center for women's and children's mental health, scheduled to be operational in 2027. ⁽²⁷⁾

The Institute of Public Health at the UAE University-College of Medicine and Health Sciences conducts a long-term study targeting the health of Emirati mothers and children. The study is conducted in cooperation with the UAE University- other departments and several major hospitals in the Emirate of Abu Dhabi. The study aims to collect data on maternal and child health to examine factors affecting maternal and child health in the prenatal stages, and the health of infants, children, and adolescents. The study provides a leading platform for research on Emirati maternal and child health and a data repository that will enable researchers to use different health outcomes for mothers and children in the early stages of life. Additionally, the study will help develop health policies and programs to improve the health services for mothers and children in the UAE. It aims to have an effective impact on the quality of life and health of the community for the Emirati mother and child. ⁽²⁸⁾

People of Determination

The UAE provides healthcare services to people of determination conveniently. In this regard, the UAE issued Federal Law No. 29 of 2006 to protect the rights of people of determination (previously known as people with disabilities). The law stipulates equal rights and opportunities for people of determination in the fields of education, healthcare, training, and rehabilitation.

Reflecting the leadership supportive vision, the UAE has inclusively developed a system for people of determination, from diagnosis and assessment, rehabilitation and education, to training and employment, and achieving family and social stability. The UAE provides the services within the framework of an updated and comprehensive database for people of determination at the state level. ⁽²⁹⁾

The UAE Ministry of Community Development-approved system made successive qualitative achievements in the care, education, rehabilitation, and empowerment of people of determination. The early detection project for developmental delay in children includes children from birth to 5 years old. The system provides comprehensive multidisciplinary assessment, education, and rehabilitation that keep pace with developments, in addition to the People of Determination card benefits, as well as the national classification of People of Determination, and the related procedures and services. ⁽³⁰⁾

The national classification of people of determination in the UAE includes 11 categories of disability the classification: Visual, autism, physical, mental, auditory, attention deficit and hyperactivity disorder, multiple, psychological, audio-visual, and learning difficulties. ⁽³¹⁾

The UAE continues, within the framework of government support, to make successive achievements in empowering people of determination and promoting an independent lifestyle for people of determination.

Communicable Diseases

Communicable diseases such as influenza, hepatitis, and pneumonia pose a threat to public health, and the UAE works to prevent and combat them through many measures, and by enacting laws and decisions related to combating communicable diseases, in addition to launching many health programs, a traveler's clinic and strengthening vaccination programs.

The health programs combating contagious and infectious diseases include the National

Immunization Program, the National Polio Eradication Program, the National Malaria Control Program, the National Hepatitis Control Program, the National Tuberculosis Control Program, and other programs.⁽³²⁾

The Ministry of Health, in cooperation with health authorities, developed the National Immunization Policy, which represents a multi-sectoral national framework for combating contagious diseases and reducing their risks to individuals and society. The policy ensures more effective and efficient use of national resources, supports the national health system, and enhances health-efficient services. The policy aims to provide high-quality services at a more comprehensive national level, enhancing comprehensive coverage of immunizations and ensuring sustainability and quality. Additionally, it achieves integration and awareness in the fields of immunizations and enhances information systems, innovation, and research.

It also aims to enhance the country's position as a health center at the regional and global levels. It raises its competitiveness in the healthcare quality index among countries of the world, promoting community health developing a comprehensive and sustainable health system, and ensuring the provision of the best high-quality immunization services.⁽³³⁾

Covid-19 Pandemic

The UAE leadership successfully and effectively responded to the pandemic and provided innovative tools and smart solutions to confront the COVID-19 pandemic. The country's practices confirmed that it is a role model, as it established a unique model of precautionary and preventive measures to contain the pandemic by keeping pace with the World Health Organization's instructions. The UAE proactively detected and treated the infected cases through expanding lab tests, tracing active contacts, providing prepared isolation facilities, and developing treatment protocols.⁽³⁴⁾



The UAE launched the free national vaccination program against COVID-19, in addition to spreading awareness and enhancing community confidence in the efficiency of the procedures.

The UAE successfully vaccinated 100% of the target groups, including citizens and residents, among the fastest countries in the world.⁽³⁵⁾

The UAE effectively used innovation and smart solutions to combat the pandemic. It also developed a smart app Green Pass, which allowed the public to view their test results, and assist the health authorities to track the medical conditions.⁽³⁶⁾

The UAE effectively conducted awareness campaigns to encourage community members to receive the vaccination. The authorities provided many health centers with around-the-clock rapid intervention to confront the epidemic. The state also established COVID-19 testing centers for community members to conduct medical tests. In addition, it established health isolation centers, fully equipped with the necessary medical equipment and medical teams, to deal with Covid-19 patients and contain the pandemic.⁽³⁷⁾



The Ministry of Health, in cooperation with other local health authorities, activated the epidemics and pandemics plan even before it detected the first COVID-19 case. The state converted some primary healthcare centers into 24-hour services, including emergency services, and hospitals for difficult cases. It also used a number of field hospitals to support health facilities backed by medical and nursing staff and thousands of effectively supportive volunteers from citizens and residents.

The UAE leadership provided state-of-the-art health facilities and exceptional cutting-edge medical capabilities. The UAE has more than 25,000 doctors to treat and care for patients, at a rate of 2.6 doctors per thousand people in the country, while globally it is 1.5, and in Europe, it is 2.4. The mortality rate in the UAE is among the lowest in the world (0.3%).⁽³⁸⁾

The Emirati medical staff successfully supervised the fieldwork, and the number of highly qualified Emirati physicians, nurses, and technicians reached about 2,000, in addition to the awareness team consisting of highly qualified Emirati physicians, nurses, and health educators.

The Emirati medicine and primary health care specialists headed medical teams supervising the isolation and quarantine of patients.⁽³⁹⁾

The leadership has made great efforts to confront the COVID-19 pandemic and protect the health and safety of society. The leadership has ensured the sector's readiness to deal with various potential scenarios of crises and emergencies, including responding to epidemics and pandemics. Efforts to deal with the pandemic began even before the UAE detected the first case, and work teams began in cooperation with the other partners since the pandemic was announced globally. Therefore, the UAE avoided the element of surprise and was ideally prepared to confront the pandemic and ensure the health and safety of people. The response to the pandemic in the country in its early stages focused on the extent of readiness and preparations to deal with emergencies. The UAE leadership supportively applied elements including joint coordination with relevant local and international authorities to achieve harmonious efforts and smooth implementation and coordination of roles and responsibilities.

The UAE also developed a system to collect information on health resources regularly and build an information database to benefit from it in decision-making. It is based on real-time data on the health system and its capacities. The system also provides real-time reports on health resources, including occupancy rates in health facilities, availability of medical specialties, and blood bank capacity, taking necessary measures to deal with various emergencies.⁽⁴⁰⁾

The UAE also provided high-quality healthcare to the COVID-19 cases and provided hospitals with the medical equipment and supplies to deal with the epidemic. It also allocated hospitals to treat cases and quarantine. It also established Covid-19 labs to test and diagnose infections. The state also expanded the scope of tests and results to enable early detection and take the necessary measures. The UAE also provided a large-scale vaccination campaign for citizens and residents to limit the spread of the virus, during which the state provided vaccines free of charge in vaccination centers in various local regions.⁽⁴¹⁾

Drug Security

The UAE is the top country in the Middle East and Africa in innovative medicines. The Ministry of Health strategy enhances the UAE's leadership and competitiveness in the health and pharmaceutical field and supports the "We the Emirates 2031" vision. It constitutes a new vision and a national action plan through which the UAE will promote development for the next decade and the next 50 years.⁽⁴²⁾

The vision is based on four themes covering all vital sectors including society, economy, and the UAE's relations with various countries. These four themes include the most prosperous society, the global center for the new economy, prominent support for international cooperation, and the most pioneering and superior system. These themes have the vision of national indicators, which include advancing the country's rank to be among the top 10 countries in the world in health care quality.⁽⁴³⁾

Awareness Campaigns

Awareness and education: The UAE health authorities educate the community on the importance of health and disease prevention. The UAE organizes educational campaigns to raise awareness about public health and promotes early detection and prevention of certain diseases, such as chronic diseases, heart disease, diabetes, and cancer. In addition, the awareness campaigns include infectious diseases, personal hygiene, and vaccinations.

Moreover, the UAE has organized campaigns to raise awareness about infectious diseases such as influenza, hepatitis, pneumonia, and COVID-19 and promote preventive actions such as taking periodic vaccinations, wearing masks, washing hands, and maintaining social distancing. The state provides educational and media materials in many languages for all age groups and communities.

Developing medical staff and attracting skilled professionals

The UAE leadership has invested in human healthcare staff to develop the health sector and provide high-quality services to the citizens and residents. The UAE is an ideal destination for human healthcare staff including physicians, nurses, and qualified health professionals worldwide. Hence, the UAE has state-of-the-art hospitals and health centers with the latest medical technologies and modern equipment. Additionally, the physicians and nurses provide healthcare at the highest level. Many medical centers and hospitals in the UAE offer job opportunities and professional development for human staff in the field of healthcare. The UAE also invests in medical education and the development of medical skills by providing multiple educational programs in the fields of medicine and healthcare, including prestigious medical universities and institutes.

The UAE adopts policies and programs to encourage citizens to work in the field of healthcare and provide them with training and professional development. These policies aim to provide job opportunities for citizens and develop their capabilities in healthcare, which contributes to improving the quality of health services in the country. The Fatima College of

Health Sciences, which was established with the support of Her Highness Sheikha Fatima bint Mubarak as part of her efforts to empower Emirati women in all fields, especially the medical field, is at the forefront of educational institutions that have succeeded since 2006 in qualifying national professionals in various health institutions.

The UAE's efforts to invest in human healthcare staff reflect its strong commitment to developing the health sector and providing the best health services. The UAE attracts internationally qualified human professionals and invests in medical education and training for health professionals. In addition, the state offers job opportunities and professional development for the citizens in healthcare.

The role of artificial intelligence in community health

Artificial intelligence is a powerful tool in promoting public health, improving healthcare, and preventing diseases, as it allows the analysis of huge amounts of data and extracting important patterns and directions. Some of these uses are:⁽⁴⁴⁾

- Early diagnosis: AI can help analyze symptoms and health data of individuals and diagnose diseases accurately and at earlier stages, leading to improved treatment and prevention opportunities.⁽⁴⁵⁾
- Personal care: AI can provide personal guidelines on diet, fitness, and general health management. Smart mobile apps can collaborate with AI to improve individual advice and disease prevention.⁽⁴⁶⁾
- Combating epidemics and diseases: AI can help track and monitor epidemics and infectious diseases. It can analyze epidemiological data, predict the spread of diseases, and guide public efforts.⁽⁴⁷⁾
- Self-care: AI can help provide accurate and reliable health information to individuals to make better health decisions and improve their lifestyle⁽⁴⁸⁾

Conclusion

The UAE healthcare leads regionally and globally in medical services and scientific achievements. The UAE is well prepared to face all health challenges in line with the trends and ambitions that the country has set its goals in the strategy for the year of preparation for the next fifty years. His Highness Sheikh Mohammed bin Zayed Al Nahyan, the UAE President, may God protect him, said, "The efficient health system is a basic criterion for the growth of countries and the progress of their societies. Healthcare will remain at the top of our priorities to achieve sustainable development, and we will continue to collaborate with our partners to confront diseases and epidemics worldwide."

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Chapter 9

Wellbeing

Nouf Mohammed Al-Junaibi

**Contemporary
Emirati Studies**

Introduction

What enables societies and individuals to be happy?

The science of wellbeing answers such questions and others and enables individuals to live a prosperous life.⁽¹⁾ In recent decades, interest in the science of wellbeing has witnessed a significant development that reflects the growing interest in understanding human life from a comprehensive perspective. The study of wellbeing is not limited to the physical aspect but focuses primarily on the psychological, emotional, and social individual state. The science of wellbeing seeks to understand the factors that contribute to human happiness and well-being, and to find evidence-based scientific methodologies to improve wellbeing. This approach includes the study of happiness, satisfaction, psychological health, and social relationships, in addition to analyzing the factors affecting wellbeing from a comprehensive scientific perspective.

The science of wellbeing, also known as positive psychology, was developed in the late twentieth century in response to the psychological disorders and mental patients in traditional psychology. Dr Martin Seligman, one of the founders of positive psychology, played a major role in developing this field. In the late 1990s, Seligman and other psychologists focused on exploring and understanding what makes life valuable,⁽²⁾ intending to enhance human happiness. Positive psychology has investigated in detail the elements that contribute to a fruitful and prosperous life for the individual and society, emphasizing the forces and factors that lead to improving wellbeing beyond the mere absence of mental illness. Researchers have also begun to explore the impact of feelings of happiness, life satisfaction, optimism, psychological resilience, gratitude, and positive experiences.⁽³⁾

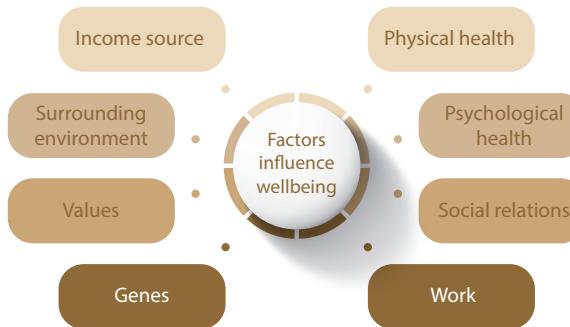
Over time, this field has expanded to various disciplines; it is a science that combines different sciences, including psychology, social studies, economics, neuroscience, and public health. This science has also received attention from governments, international organizations, and individuals around the world, seeking to draw evidence-based strategies to improve wellbeing, enhance productivity, and build healthier and happier societies. Like any other science, the science of wellbeing evolves with ongoing research to explore various aspects of the potential for human happiness, the factors that contribute to creating a meaningful life, and scientific methods to enhance the wellbeing of the individual and social levels.

Factors influence well-being:

The wellbeing expresses the extent of your general satisfaction with your life. Here we do not mean the external influences that affect your life, but rather the factors that matter

to you, your personal condition and your view of life, your relationships, and your physical and psychological health. In chart ⁽⁴⁾ the most important factors that affect the wellbeing of individuals.

Well-being reflects the extent of your overall satisfaction with life. Here, we are not referring to external influences on your life, but rather to the factors that are important to you—your personal circumstances, your outlook on life , your relationships, as well as your physical and psychological health. Chart (4) shows the most important factors that affect individuals' well-being.



Physical and Mental health:

Physical health and mental health are closely related. They include aspects such as exercise, proper nutrition, and adequate sleep. Mental health, including emotional resilience, psychological adaptation strategies, and psychological well-being, significantly affects overall happiness and life satisfaction.

Income and Financial Security:

Financial stability provides a sense of security, enabling individuals to meet their basic needs and pursue opportunities for personal growth. Good income is often associated with improved access to health care, education, and resources that enhance wellbeing.

Environment:

Environmental factors such as clean air, safe neighborhoods, access to green spaces, and social amenities play a critical role in wellbeing. A positive environment fosters a sense of belonging and security, contributing to personal happiness.

Social relationships:

Strong social ties and collaborative relationships contribute significantly to wellbeing. Positive interactions with friends and family and a sense of belonging to a community provide emotional support, reduce stress, and enhance life satisfaction.

Genetic and hereditary factors:

The genetic factors influence an individual's behaviors, they also play a role in determining an individual's level of happiness or emotional resilience. However, genetics is a complex part of wellbeing and can be influenced by environmental and personal factors.

The ability to set and achieve goals:

The ability to make clear goals, celebrate personal achievements, pursue passions, and aspirations, and a sense of accomplishment contribute to personal satisfaction and happiness in life.

These factors interact to affect an individual's wellbeing; the multiple aspects are addressed to move toward a comprehensive approach to improving wellbeing. These influences are scientifically measured to assess the various factors of well-being. These measures include physical and mental elements of health, income level, environmental quality, social relationships, and even genetic factors that affect an individual's overall wellbeing. While government policies play a vital role in enhancing the wellbeing of societies, governments and policymakers can shed light on the social, economic, and health needs, and employ efforts and resources for improving the wellbeing of the citizens. Additionally, by adopting policies and programs based on the results of wellbeing studies, governments can promote sustainable development and enhance happiness and progress in society.

These factors interact to influence an individual's well-being, and addressing multiple aspects contributes to a more comprehensive approach to improving well-being. These influences are scientifically measured to assess various dimensions of well-being, including physical and mental health, income levels, environmental quality, social relationships, and even genetic factors. While government policies play a crucial role in enhancing societal well-being, policymakers can highlight social, economic, and health needs, and allocate resources and efforts to improve citizens' well-being. Furthermore, by adopting policies and programs informed by well-being research, governments can promote sustainable development, enhance happiness, and foster progress in society.

Common Terms in the science of wellbeing:

The common terminology in the science of wellbeing is vital as it provides a structured framework for assessing and measuring different aspects of the influences and factors on wellbeing, whether for individuals or society as a whole. This knowledge enables researchers and practitioners to effectively assess and track individual and social well-being when developing strategies to enhance wellbeing, whether at the individual or societal level.

Happiness

It is feeling and psychological satisfaction that are not permanent states, as it is affected by various factors such as social relationships, health, and individual situations.⁽⁵⁾

Subjective Well-being

The wellbeing of people who evaluate their personal feelings and appreciate their general conditions.⁽⁶⁾

Wellbeing

The factors that affect personal wellbeing are health, social, psychological, and environmental aspects.⁽⁷⁾

Positive Psychology

Positive psychology is a branch that focuses on the strengths and virtues allowing individuals to build a life of positivity and personal growth.⁽⁸⁾

Resilience

The ability to adapt and recover from Adversities and pressures in a way that maintains wellbeing and mental health.⁽⁹⁾

Emotional Intelligence

The ability to recognize, control, understand, and manage personal feelings effectively.⁽¹⁰⁾

Mindfulness

Focused attention to the present moment without judgment is often developed through meditation or mindfulness practices.⁽¹¹⁾

Self-compassion

Kindness and understanding toward oneself, especially during times of failure or difficulty, contribute to emotional and psychological well-being.⁽¹²⁾

Flourishing

It is an optimal state of wellbeing characterized by positive emotions, engagement, positive relationships, meaning, and fulfillment.⁽¹³⁾

Eudaimonia

It is a concept that refers to a life filled with virtue, purpose, and personal fulfillment.⁽¹⁴⁾

Positive Psychology Interventions

Activities or programs enhance wellbeing or personal happiness. For example, mindfulness training is codified by positive psychologists.⁽¹⁵⁾

Life Satisfaction

It is a person's overall appreciation of his or her life.⁽¹⁶⁾

Concepts that impede proper application for the Wellbeing System:

Fake Magic:

Some people describe the science of wellbeing as magic that can solve all of life's problems, creating unrealistic expectations about its ability to bring lasting happiness. This misunderstanding ignores the complexities and other aspects of life.^{(17) (18)}

The concept of happiness is associated with material things only:

Many people consider material wealth alone as the source of happiness and wellbeing, without taking into account other influential factors. This belief ignores the psychological, social, and personal satisfaction aspects.⁽¹⁹⁾

False/toxic positivity:

False positivity has a significant negative impact on the well-being of society. It encourages an unhealthy over-focus on positivity, which devalues real emotional experiences and prevents from acknowledging and understanding negative feelings. This constant focus on positivity creates unrealistic expectations, leading individuals to feel pressured to suppress real feelings to fit the positive narrative. False positivity leads to a decline in real relationships and hinders real social connections. This approach devalues dealing with difficult emotions, which increases

levels of stress, anxiety, and mental health problems in the long term. The acceptance of different balanced feelings enhances real wellbeing and creates healthy societies.⁽²⁰⁾

Why is wellbeing important to societies?

Why does the UAE adopt wellbeing?

Societies' progress and prosperity depend on wellbeing. According to the research (Putnam, 2000)⁽²¹⁾, a prosperous society not only enhances the lives of individuals but also contributes to broader social progress. Wellbeing fosters an environment and supports individuals, which enhances productivity, creativity, and economic growth. In addition, social cohesion (Kawachi and Berkman, 2000 and⁽²²⁾ enhances strong social ties and belonging among residents. This cohesion is a major factor in building trust and communication. It also has a significant impact on physical health. The wellbeing promotes easy access to healthcare, well-thought-out infrastructure, and social resilience during difficult times and crises (Norris et al., 2008)⁽²³⁾. Accordingly, the UAE government has realized the importance of investing in wellbeing to ensure the stability of citizens and residents. The wellbeing importance for society in the UAE is as follows:

Society well-being: Wellbeing greatly affects the overall wellbeing and the happiness of community members, which affects their satisfaction with life.

Social cohesion: Wellbeing enhances strong social relations, trust, and cooperation within communities, which contributes to social peace.

Economic prosperity: Wellbeing attracts businesses, investments, and skilled workers, which stimulates economic growth and stability.

Health and Safety: Better wellbeing indicators are linked to improved health, access to healthcare, and safe residential environments.

Sustainable Development: Encouraging sustainable practices and preserving the environment and infrastructure.

Wellbeing in the UAE

The UAE leadership vision achieves the well-being and happiness of the UAE citizens and residents. Since its establishment in 1971, the UAE government has developed infrastructure

and provided services to the society ensuring wellbeing and stability. The vision is evident in many initiatives and policies that focus on achieving the wellbeing of citizens and residents. The government has sought to make the UAE one of the best and happiest countries in the world. In 2016, the UAE announced the appointment of a Minister of Happiness and Wellbeing, a unique position in the world, intending to enhance the wellbeing and happiness of citizens and residents.

The mission consists of the factors that affect individual and societal happiness and proposing policies and solutions that improve wellbeing and increase personal and social satisfaction. These efforts achieve the UAE's vision for better well-being and happiness for all its residents.

The programs and initiatives that have been launched since the appointment of the Minister of State for Happiness and Wellbeing are:

National Program for Happiness and Wellbeing:

The UAE has implemented a comprehensive national program for happiness and wellbeing. This program aims to integrate happiness and wellbeing into various sectors, emphasizing the importance of these aspects in national development. The UAE signed local and international agreements to enhance the wellbeing nationwide.

Happiness Charter:

The UAE has introduced the “Happiness Charter” that sets out guidelines and principles for promoting happiness in all government entities. This charter focused on the importance of positive behavior, customer satisfaction, and employee well-being in public services.

Happiness and Positivity Councils:

Happiness and Positivity Councils have been established at various government levels to integrate the principles of happiness and positivity into policies and services. These councils aim to assess and improve happiness in society.

Global Happiness Dialogue:⁽²⁴⁾

The UAE annually hosts the World Government Summit, which includes the Global Happiness Dialogue session, a platform that brings together international experts and leaders to exchange ideas and the best practices to promote happiness globally.

Global Happiness Festivals:

The UAE organized global happiness festivals to celebrate happiness as a lifestyle and

raise awareness about the importance of implementing positive interventions through daily practices. These festivals include activities, workshops, and seminars that promote positivity and wellbeing.

Happiness and Wellbeing Index:

The UAE has developed and periodically updated the Happiness and Wellbeing Index to measure levels of happiness and satisfaction among the population. This index has become a tool for assessing the effectiveness of policies in enhancing the well-being of citizens and residents.

Happiness and Wellbeing at Workplace:

The UAE developed a guide for the officials in different work environments to apply the wellbeing consistent with their work. The guide aims to adopt applicable and measurable scientific methods that enhance the productivity of employees and their sense of belonging to their work.⁽²⁵⁾

School of Life:

The experts and scientists in the field of happiness and wellbeing conduct programs and workshops for the public to promote a culture of happiness.

The initiatives can be classified as follows:

Government initiatives:

The initiatives create a supportive and positive environment for citizens and residents. They also improve the quality of government services by positively ensuring the well-being of individuals. This includes improving the efficiency and effectiveness of services provided to all.

Community initiatives:

The initiatives create strong and cooperative communities, which contribute to the wellbeing of the individual.

Global initiatives:

The UAE has hosted annual meetings with experts and officials in the field of happiness to learn from their experiences and disseminate them globally so that the UAE is one of the leading countries and contributes to the fields of happiness and wellbeing.

The table below shows the initiatives launched by the National Program for Happiness and Wellbeing within the above-mentioned agenda (Government, Global, and Community)

| Global | Community | Government |
|--|---|--|
| <ul style="list-style-type: none"> • Global Dialogue for Happiness and Wellbeing • World Happiness Council • World Happiness Alliance | <ul style="list-style-type: none"> • Happiness Index in Government Services • Happiness and Wellbeing Policy Package • Happiness Journey • National Survey for Happiness and Wellbeing • Positive Schools Network • My Purposeful Life Program • Digital Wellbeing Program • Child Digital Safety • School of Life | <ul style="list-style-type: none"> • Government Network of CEOs for Happiness and Wellbeing • Customer Happiness Coaches Program • Happiness and Positivity Champions Medal • Happiness Seminar Series • Policy Alignment Program for Achieving Community Happiness • Happiness and Wellbeing Program in the Work Environment • Happiness Charter |

These initiatives reflect the UAE's commitment to raising the level of happiness and wellbeing for its people and residents promoting national prosperity. Wellbeing is an important factor in enhancing social cohesion and solidarity. The initiatives take into account social and cultural diversity to ensure that all initiatives are suitable for different social segments. The government also focuses on groups such as people of determination.⁽²⁶⁾ The UAE always readily shares the concepts of wellbeing globally and exchanges its experiences with neighboring countries as well. The wellbeing is in line with the United Nations Sustainable Development Goals, as it emphasizes the importance of economic growth and social and environmental sustainability.

National Strategy for Wellbeing

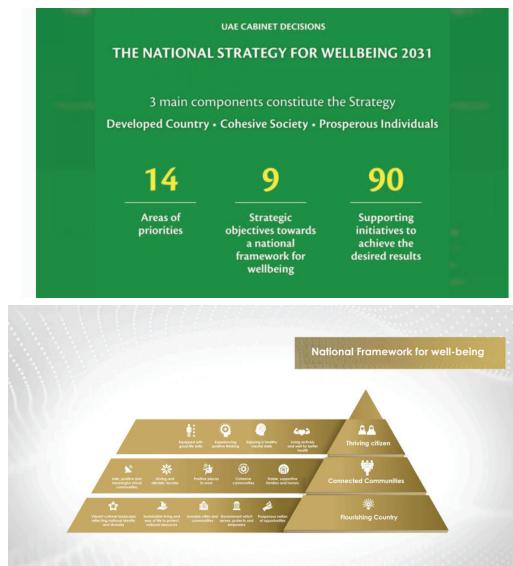
The National Strategy for Wellbeing 2031 aims to define strategic goals and areas that make the UAE a global leader in wellbeing and enhance its position as one of the happiest countries in the world. The UAE government prioritizes the wellbeing of citizens to achieve continuous development and sustainability in this pivotal sector. The UAE seeks to transfer the good life to a more comprehensive concept of wellbeing and achieve the goals of the UAE Centennial 2071.

The National Strategy for Wellbeing has a national framework that includes 3 individual, social, and national levels and consists of 14 themes and 9 strategic goals. These goals promote

a healthy lifestyle, encourage a healthy lifestyle, promote good mental health, and positive thinking, and improve life skills.

The strategy consolidates the foundations of a cohesive society and enhances the quality of social bonds and relationships in the family and society. It enhances digital life, encourages positive digital communities, and adopts wellbeing in learning and work environments. Additionally, the strategy promotes the values of giving, cooperation, solidarity, and community service, and enhances the livability, attractiveness, and sustainability of cities and regions.

The chart below illustrates the main themes of the strategy⁽²⁷⁾ and the National Framework for Wellbeing.⁽²⁸⁾



The strategy is based on four enablers: 1- monitoring of wellbeing, 2- monitoring of behaviors, 3- government as a single platform, and 4- comprehensive empowerment of employees and individuals in society.

Wellbeing in the education sector:

The UAE positive education combines traditional education with the science of wellbeing, with a focus on developing personal strengths, enhancing resilience, promoting positive relationships, and developing emotional intelligence. The wellbeing initiatives improved the student's academic performance and enhanced wellbeing. For example, the concept of mindfulness reduces stress, regulates emotions, improves students' attention, strengthens classroom engagement, and enhances psychological wellbeing. The concepts enhance

educational environments and encourage students to develop healthily (mentally and physically). Moreover, the concepts prepare the environment for the students to achieve academic success and a cooperative community. The UAE has integrated positive education principles into the education system. The positive education principles aim to enhance the student's life, support personal strengths, improve positive communication, and develop emotional intelligence ⁽²⁹⁾. The factors for applying the concepts of happiness and wellbeing in the education sector include:

Curriculum integration:

The positive education principles are integrated into the educational curricula to allow students to interact with the concepts of happiness and wellbeing within the educational subjects. The principles have not been separated into a separate scientific subject.

Teacher training programs:

The teacher training programs improve the positive education concepts. The concepts integrate into the learning environment, transfer positivity to students, and positively affect the educational environment.

Positive communication:

This creates positive relationships between students, teachers, and parents and enhances positive communication between classmates.

The UAE efforts made in the education sector are:

Moral Education Program:

The Moral Education Program includes four themes: character and ethics, the individual and society, civic education, and cultural education, and combines academic content with methods of exploring character and ethics. The program is a gradual series of units taught over 12 years from grade 1 to grade 2.

The program, which is taught to students starting from the first grade, aims to promote the concepts of equality, tolerance, honesty, and the value of family ties, and friendships, in addition to understanding the importance of heritage. In the following stages up to the fourth grade, students study the concepts of character, ethics, and the principles of community and cultural studies. ⁽³⁰⁾

My Purposeful Life Program:

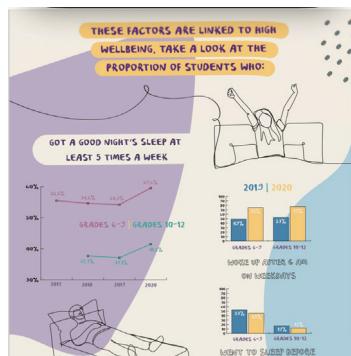
The National Program for Happiness and Wellbeing launched the "My Purposeful Life" initiative in cooperation with a number of national universities. The initiative aims to empower

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Emirati students enhance their awareness, and set their goals early to live a positive, responsible, and purposeful life. The “My Purposeful Life” program is an intensive experience that provides a stimulating environment for participants. The first phase consists of a workshop presented by experts and various interactive activities, in addition to dialogue and motivational sessions with inspiring figures in the UAE community. The UAE University and Zayed University organized these events. The second phase is the “Project of Purpose”, which includes students working on a purposeful practical project that serves the community and the nation.⁽³¹⁾

Dubai Student Wellbeing Census:

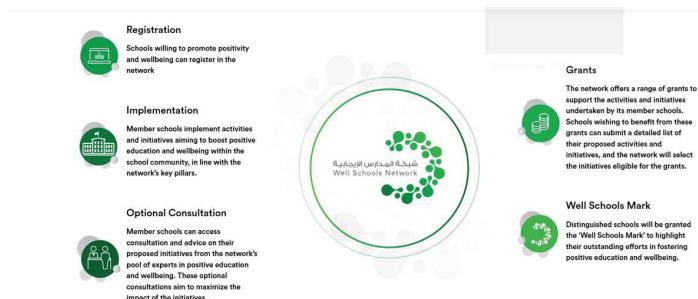
In 2017, the Knowledge and Human Development Authority partnered with the Government of South Australia to conduct the first-ever Dubai student wellbeing private schools for all grades 6 to 9 (Years 7 to 10 in the British curriculum). In 2018, it was expanded to include students in grades 10, 11, and 12 (Years 11, 12 and 13 in the British curriculum). The Dubai Student Wellbeing aims to understand students' feelings and opinions about their wellbeing, happiness, and participation in society.⁽³²⁾ The results report easily shows the factors that influence student wellbeing (see figure below).⁽³³⁾



Positive Schools Network:

The Positive Schools Network is a national network available for public and private schools in the UAE to promote positive education and enhance the wellbeing of students and teachers. The network provides a flexible mechanism that helps the schools implement the positive education and wellbeing. The network applies themes and elements to achieve positive benefits at the school community level. The image below⁽³⁴⁾ shows the registered schools' benefits. The included categories are students, teachers, parents, and community.

These efforts represent an attempt to provide a positive learning environment and enhance the personal and academic growth of students in the UAE.



The UAE's positive education significantly complies with a comprehensive collaborative approach, as the UAE government has taken decisive steps to ensure integration and cooperation in this context. The government efforts are part of a clear vision to achieve comprehensive progress in the field of education, as these initiatives enhance the quality of education and emphasize that education is not limited to academic aspects only. The government seeks to add value to the wellbeing and experience of students and faculty in collaboration with health, infrastructure, and other vital sectors that have a direct or indirect role in the education sector.

Public Health

The UAE "We the Emirates 2031" vision ⁽³⁵⁾, aims to promote an advanced and integrated health system, available to all. The improvement promotes the wellbeing of individuals and a healthy lifestyle. It achieves the highest levels of readiness for the future and high quality of healthcare. The UAE develops a preventive system to maintain individual and community health. The UAE provides comprehensive health services in a sustainable environment, focusing on improving the wellbeing of individuals and promoting a healthy lifestyle. The important initiatives include:

Early screening of breast cancer:

The UAE conducts free campaigns of early screening for breast cancer that aim to achieve community protection.

Diabetes Early Diagnosis:

The Ministry of Health's strategy launches the Diabetes Early Diagnosis Program which aims to provide treatment and preventive options for the community.

Traveler Health Clinics:

The UAE develops traveler health clinics to enhance the prevention of infectious diseases and provide services to travelers.

Charitable Clinics:

The “Charitable Clinics” initiative provides free medical consultations to all people, to consolidate the spirit of giving.

Electronic consultations:

The government portal electronic consultations interact with the public and collect their opinions on improving health services.

To ensure that services are comprehensive for all segments of society, the UAE has also focused on categories such as people of determination and senior citizens.

People of Determination Health:

The UAE issued Federal Law No. 29 of 2006⁽³⁶⁾ to protect the rights of people with disabilities⁽³⁷⁾. The law stresses the need to provide care and equal opportunities in the fields of education, healthcare, training, and rehabilitation. Article 2 stipulates that people with special needs shall not be deprived of rights and services, especially in the areas of social, economic, health, educational, professional, cultural, and recreational care.

The Ministry of Health provides reports on the severity of medical disability to determine the extent of medical care for people with disabilities and relies on medical reports to obtain disabled parking permits. The Department of Health in Abu Dhabi assesses the mental state and fitness required to work for people with special needs.

Senior Citizens Health and Rehabilitation:

The Ministry of Health has launched several initiatives to support health care for senior citizens, including home care services. The UAE provided mobile clinics in remote areas and integrated medical and advisory services, including physical therapy, rehabilitation, prevention, dental and eye treatment, skin diseases, and diabetes.⁽³⁸⁾

The UAE involves all stakeholders to enhance the wellbeing of various sectors. The National Program for Happiness and Wellbeing launched the Community Design for Wellbeing initiative, in which different individuals participate in preparing the relevant initiatives and

policies. The community design session in April 2019 resulted in a policy for labeling the nutritional values of products. The program in cooperation with the UAE government Food Security Office developed the policy that has been implemented by the Emirates Authority for Standardization and Metrology. The policy aims to promote a healthy lifestyle and improve the level of public health in society. The policy has four elements that significantly affect public health: sugar, salts, fats, and calories. The policy includes colored labels on products to clarify the proportions of nutritional components. The app allows consumers to improve food choices and promotes a healthy and balanced nutritional culture. It supports the goals of the National Strategy for Wellbeing by encouraging a healthy and active lifestyle as well. ⁽³⁹⁾

The state's efforts promote physical and psychological health because it is the basis of improving wellbeing. The National Program for Happiness and Wellbeing and The Federal Youth Authority, on July 27, 2019, jointly launched the Youth Mental Health initiatives in line with the goals of the National Strategy for Wellbeing 2031, launched by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai. The strategy promotes good mental health at the individual level as a primary goal. ⁽⁴¹⁾ The Youth Mental Health initiative aims to build an interactive platform that brings together young people, mental health experts, and specialists, to spread and adopt the best experiences and practices that contribute to promoting good mental health for young people. This initiative focuses on the youth because of the importance of this age group in developing character, and its association with several important stages including academic achievement, starting a job, and forming a family.

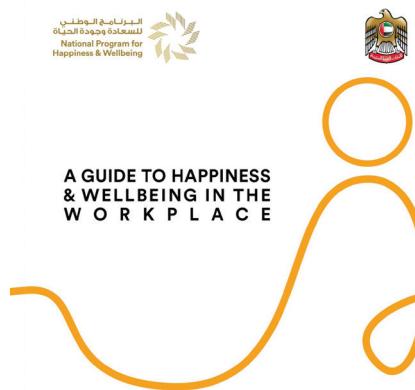
Workplace Wellbeing

Workplace wellbeing aims to promote the health, happiness, and overall satisfaction of employees in the workplace. This includes physical, mental, and emotional aspects, overcoming negative factors such as stress or burnout, and promoting positive factors such as work engagement and a supportive culture.

Shanafelt et. All 2017 ⁽⁴²⁾ published a study in the International Journal of Environmental and Health Research that defines workplace wellbeing as a state in which employees feel physically and mentally safe, have opportunities for personal and professional growth, feel a balance between work and personal life, and have a positive relationship with their colleagues and supervisors. The multifaceted concept takes into account individual health, job satisfaction, the work environment, and organization.

To apply workplace wellbeing standards scientifically, comprehensively, and sustainably, the National Program for Happiness and Wellbeing team seeks the help of local and international experts in this field. The UAE government believes that the balance between work and personal life reduces stress and increases employee satisfaction in the job as scientifically proven (Allen, T. D., et al. 2013).⁽⁴³⁾

The National Program for Happiness and Wellbeing launched the Happiness and Wellbeing Guide in the Work Environment⁽⁴⁴⁾ intending to provide guidelines to government agencies, private stakeholders, and non-governmental organizations. This guide aims to help understand and adopt the appropriate environment to achieve workplace wellbeing.



According to the guide,⁽⁴⁵⁾ suitable conditions for employees can motivate them to achieve their personal goals and the goals of the organization. In addition, the guide addresses measurable benefits including increased employee retention rates, enhanced productivity and quality of work, and improved quality of services provided by the organization to customers. The workplace wellbeing guide promotes personal development and organizational prosperity.
(46)

The Workplace Happiness and Wellbeing Guide cannot be overstated. Beyond the intrinsic value of promoting a positive and supportive work culture, the guide is a practical tool to enhance employee satisfaction and motivate them to achieve their goals and the goals of the organization. By meeting the comprehensive needs of employees and providing practical strategies to create suitable working conditions, the guide increases employee retention rates, enhances productivity and quality of work, and improves the quality of services provided by the organization to customers. This guide is essential in achieving a balance between organizational goals and the wellbeing and happiness of the workforce, which embodies the UAE government's

commitment to creating thriving and inspiring work environments.

The UAE National Program for Happiness and Wellbeing trained CEOs for happiness and wellbeing in government entities, within the Happiness and Wellbeing Diploma Program in cooperation with an international university. Among the topics covered in the program are

The science of happiness and wellbeing

- Mindfulness.
- leading a happy work team.
- Happiness and policies in government work.
- Measuring happiness.

The program selected representatives from various government and federal entities to be CEOs as a link between the program and the work environment. The network works on programs and initiatives that meet the needs of UAE government employees for happiness and wellbeing within the work environment.

“Be with your families, for they are a precious gift bestowed upon us by God” His Highness Sheikh Mohammed bin Zayed Al Nahyan.

The UAE creates supportive environments for parenting. The Abu Dhabi Early Childhood Authority organized an award for various employers that enhance parental support. The government believes in the importance of this support and its impact on family cohesion and the quality of their lives.⁽⁴⁷⁾ The appropriate work environment for parents constitutes a vital factor that enhances their effective participation in developing comprehensive and healthy growth of their children during the vital growth stage. The stage extends from birth to eight years. The UAE is dedicated to supporting the growth and prosperity of children to enhance social and family ties. It results in improving the societal perception of working parents, and accelerates the positive impact on employee participation and enhancing their wellbeing. It contributes to retaining the employees, enhancing their productivity, and responding effectively to the aspirations to achieve economic growth and social welfare in the Emirate of Abu Dhabi.

Happiness and Wellbeing Program in the Workplace

This program aims to enhance the happiness and wellbeing in the work environment within government entities. The program includes procedures, starting with the annual measurement of the level of employee happiness and wellbeing, providing the entities with the annual results,

a guide to happiness and wellbeing in the work environment, and supportive initiatives. In addition, the National Happiness and Wellbeing Program team intensively follows up with them.

Customer Happiness Program:

The UAE launched a program to train front-line service providers to ensure that the services provide happiness and satisfaction to customers within an equation issued on May 10, 2016. It aims to establish and enhance the concepts of happiness in customer service centers so that these concepts are part of the culture and practices of government entities. The program provides customer service employees with tools and values that help them implement government initiatives to achieve customer happiness and improve their wellbeing. The Customer Service Charter-based equation focuses on three main elements. The first element is the employee who is proud to provide excellent services, rendering a happy experience for the customer, adopting the slogan “We pledge to make you happy”, managing professionally, and listening well. The second element is that the entity works hard to achieve customer happiness, and provides quick and simple services. The third element focuses on the customer who effectively and positively improves services and gives constructive suggestions. To ensure that front-line workers are motivated, the Happiness and Positivity Champions Medal Program was launched, which honors distinguished front-line employees according to well-studied criteria.⁽⁴⁸⁾

The National Happiness and Wellbeing Program organizes the Government Forum for Best Practices to promote happiness and wellbeing. More than 25 entities participated in the forum to share their experiences and initiatives within the following target groups (society, employees, and customers). The participants in the form exchange experiences, challenges to ensure the wellbeing concepts easily, and comprehensively.⁽⁴⁹⁾

The UAE government's wellbeing initiatives ensure the state's commitment to enhancing happiness and wellbeing for the citizens and residents, as the government believes that wellbeing is an important factor in enhancing national prosperity and social cohesion. The government-designed initiatives take into account social and cultural diversity to ensure that all these initiatives are suitable for the different social segments including people of determination.⁽⁵⁰⁾ The UAE has kindly exchanged expertise in the concepts of wellbeing globally and shared experiences with the neighboring countries. The wellbeing achieves the United Nations Sustainable Development Goals, which promote economic growth and social and environmental sustainability.

The UAE digital wellbeing

Digital wellbeing represents the comprehensive and balanced life that suits digital citizens, digital societies, and the digital state in general. To achieve this balanced life, the government should achieve a healthy balance between online and offline activities, and ensure that technology enhances people's lives and overall wellbeing instead of disturbance and distraction.

Many factors affect the quality of digital life and depend mainly on our decisions and choices online. The more time we spend on the internet and digital devices, the more opportunities we are exposed to risks such as inappropriate content or cyberbullying. Therefore, we must be careful and conscious in our use of the internet. The people we interact with, the content we explore, and the time we spend online are all examples of decisions that affect the quality of our digital lives.

The UAE government has realized that digital wellbeing is a collective responsibility that requires the cooperation of all parties, including the government, the private sector, parents, caregivers, educators, and the entire community, to enhance the quality of digital life, face the digital challenges, and reduce potential digital risks.

The government relied on the below basic themes in considering and defining digital wellbeing: ⁽⁵¹⁾

Digital wellbeing is an integral part of the UAE citizens' and communities' overall wellbeing.

The effects of our digital life can significantly affect our reality in daily life, as digital life and real life are not separated but rather are greatly intertwined. Therefore, paying attention to the quality of our digital life necessarily means paying attention to the quality of our life in general.

In fact, it is not feasible to resist or reject the new digital technologies, the government instead encourages learning how to use technology safely and usefully. Digital citizens must strive for a positive, healthy, responsible, and satisfying life in the digital environment. The interconnected societies form a safe, participatory, and tolerant society and its members care for each other with cohesive and adaptable families and communities. Similarly, digital people must form safe, positive, supportive, and purposeful virtual communities.

Digital Wellbeing Program

The National Program for Happiness and Wellbeing and the Ministry of Interior launched the Digital Wellbeing Program in March 2018, it is an initiative that aims to raise awareness

about digital risks and challenges and promote the safe and positive use of digital technologies and the Internet. The program supports all social segments from children and adolescents to adults and the elderly, to improve the quality of digital life for the UAE population. The program has four main digital pillars: capabilities, behavior, communication, and content.

The digital capabilities aim to increase the level of digital knowledge and awareness among segments of society and provide a digital support platform that provides tools and information to empower individuals and help them face the challenges of the digital world. The program also offers interactive rehabilitation and remedial programs for adults and the elderly.

Digital behavior focuses on managing time on the Internet and protecting the digital footprint. This includes digital ethical values, online behaviors, and options for reporting unethical behavior.

Digital communication focuses on providing safe relationships and connections on the Internet, by managing communications and relationships and providing digital security services.

The last pillar aims to improve the quality of content, by providing useful and meaningful digital content and promoting positive digital usage.

National Policy for Digital Wellbeing:

The National Policy for Digital Wellbeing promotes a safe digital society in the country and creates a positive identity with purposeful interaction on the digital and social levels.⁽⁵²⁾ Based on the four pillars mentioned above, the strategy relied on four initiatives

1. The Knowledge Platform for Digital Wellbeing: It is an electronic portal containing awareness content designed to build digital capabilities, especially for students, parents, and teachers, as well as people of determination and senior citizens.
2. The Charter of Positive Digital Citizenship Values, the charter is in line with the changes in the world due to the era of digital governance, and reflects the values of the Emirati society of tolerance, coexistence, and noble human values, by promoting digital wellbeing and a safe and positive digital society.
3. The Digital Wellbeing Curriculum Initiative aims to include digital citizenship concepts in curricula from kindergarten to twelfth grade, in subjects such as moral education, social studies, Islamic education, Arabic for non-native speakers, Design and Technology, Computer Science, Creative Design and Innovation.

4. Sannif platform for evaluating the content of electronic games – that helps parents to identify and examine electronic games. The platform provides the ability to search for any electronic game and display potential risks, which allows parents to choose appropriate games for their children.

The goal is to ensure a healthy and positive digital environment for our generations who have spent more time in virtual reality than in real life. The goal is to make their reality positive, productive, and safe.) His Highness Sheikh Mohammed bin Rashid Al Maktoum.

With advanced sciences such as space science, human communication impact is significant on the wellbeing of individuals. For example, the Emirati astronaut Sultan Al Neyadi in his journey, which lasted for 6 months, used social media and other platforms to communicate with his family and all his followers in the UAE.

Conclusion

The UAE's strategic vision proactively implements happiness and wellbeing. The UAE takes the required steps and procedures to promote wellbeing in all areas of life, which enhances its various dimensions at the societal level, and within a methodological framework based on the fundamentals of the science of wellbeing, and the related theories. The research attempted to provide the wellbeing science foundations and clarify the UAE leadership's practically qualitative initiatives. The research is an in-depth study that shows the wellbeing and happiness initiatives in the UAE and highlights the UAE's strategic visions in this field.

Footnotes

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<https://www.hw.gov.ae/ar/> The Abu Dhabi Early Childhood Authority is launching initiatives Several to support this concept
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Chapter 10

Environmental Sustainability

Dr. Rawya Rashid Al Kindi

1. Introduction

1.1: Background

What is the definition of sustainable development? How has the concept of sustainability evolved over the years? What are the main features of the development? What are the factors that influence sustainable development today?

Sustainable development is the idea that human societies can meet their needs without compromising future generations to meet their needs. The initial formulation of the “official” definition of sustainable development was stated in the Brundtland Report of 1987. Sustainable development involves sustainable social structures that take into account both present and future essentials, such as the preservation of the environment, protection of natural resources, and promotion of social and economic justice.



(<https://www.linkedin.com/pulse/sustainable-designing-manufacturing-building-better-future-gautam>,
2023)

How is sustainable development relevant?

The Industrial Revolution is closely connected with the emergence of the concept of sustainable development. In the second half of the 19th century, Western societies realized the significant impact of their economic and industrial activities on the environment and social balance. The world's environmental and social crises inevitably required more sustainable models (1a).

In 1968, the environmentalist and philosopher Garrett Hardin wrote an essay entitled “Tragedy of the Commons” in which he argued that if individuals acted independently in pursuit

of their interests, this would inevitably undermine the collective interests of their communities and deplete the Earth's natural resources. According to Hardin, unrestricted access and rampant consumption of limited resources by humans would lead to the depletion of these resources. He believed that, given humanity's tendency toward unlimited reproduction, a radical shift in the use of common resources would be necessary to avoid a future catastrophe and maintain sustainable development.



(<https://www.daily-sun.com/printversion/details/721189>, 2023)

A study addresses the interaction between five dimensions: world population growth, industrialization, pollution food production, and depletion of non-renewable resources. The analysis takes into account a scenario in which these variables show exponential growth and the technology's ability to increase resources has a linear graph.

The most convincing result suggests that in the absence of constraints on growth, economic and social collapse is likely to occur by the end of the 21st century. After more than four decades, these predictions will be confirmed, particularly pollution and its harmful effects, which pose a serious threat to the pursuit of sustainable development (1b).



(<https://ar.pinterest.com/pin/538743174145597944/>, 2013)

1.2 Sustainable Development Goals

- **Sustainable Development Goals**

The Sustainable Development Goals (SDGs) consist of 17 interconnected goals designed as a blueprint for achieving a better, more sustainable future for all. Established by the United Nations General Assembly in 2015, the goals are to be achieved by 2030 and are a central element of the UN resolution known as the “2030 Agenda”.



(<https://medium.com/@frankkalonga/why-ict-is-core-to-national-development-achieving-the-sdgs-part-4-891548f03aaa>, 2019)

- **UAE Sustainability Agenda:**

The UAE is committed to pursuing the Sustainable Development Goals (SDGs) that facilitate access to clean energy, affordable food, quality education, healthcare, sustainable economic growth, and the preservation of healthy ecosystems, along with increasing resource efficiency. These goals resonate deeply within the country, reflecting a dedication to addressing major global challenges. In addition, the UAE has pledged to “leave no one behind” and has actively sought to steer the world towards a sustainable and resilient way.

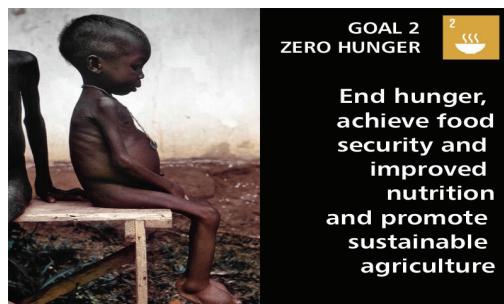
- **The Ministry of Climate Change and Environment's efforts in the field of sustainability:**

In line with the UAE Vision 2021, the Ministry of Climate Change and Environment is collaborating with relevant federal and local entities to achieve Sustainable Development Goals 2, 12, 13, 14 and 15. The UAE has implemented various initiatives to preserve ecosystems and ensure the sustainability of natural resources.

The most prominent initiatives include:

Goal 2: Zero Hunger

- Agricultural policy and the shift towards modern agricultural methods (hydroponic, organic, vertical, and protected farming)
- Transforming the agricultural and livestock sectors commercially (providing production inputs, extension, and pest control)
- Food safety (food safety law)
- Adopting aquaculture (1.3)



(<https://www.semanticscholar.org/paper/Current-Trend-in-Nutritional-Rehabilitation-of-in-A-Adebayo-Balogun/791273224a410d26f93067cb5fde6d317ba702b0>, 2018)

Goal 12: Responsible consumption and production

- National Policy for Vibrant Communities.
- National Policy for Reducing Transport Sector Emissions.
- UAE Energy Strategy 2050.



(<https://blog.brightcities.city/sustainable-development-goal-12-responsible-production-and-consumption>)

Goal 13: Climate Action

- UAE National Climate Change Plan 2017-2050.
- UAE Energy Strategy 2050.
- National Climate Change Adaptation Program.
- Climate Innovation Exchange Initiative (CLIX).



(<https://ai4good.org/blog/sdg-13-climate-action-2022>)

Goal 14: Life Below Water

- UAE Smart Map of Natural Capital.
- UAE National Action Plan for Shark Conservation and Management (2018-2021).
- UAE National Action Plan for Marine Turtle Conservation (2018-2021).
- UAE National Framework Statement for Sustainable Fisheries (2019-2030).



(<https://www.isglobal.org/en/-/sdg-14-conserve-and-sustainably-use-the-oceans-seas-and-marineresources-for-sustainable-development>, Mar.11, 2020)

Goal 15: Life on Land

Contemporary Emirati Studies

- UAE Smart Map of Natural Capital.
- UAE Marine Habitat Mapping Project.
- Electronic Permits System (CITES 2017).
- Important Bird Areas (IBA) Project.



(<https://jointsdgfund.org/sustainable-development-goals/goal-15-life-land>, 2019)

2. Natural Resources

2.1: Water Conservation and Renewable Energy.

- **The UAE Launches National Program for Rationalization of Water and Energy Consumption.**

The program includes three main pillars: energy, water, and rationalization of consumption.



(<https://www.utilities-me.com/utilities/uae-launches-national-programme-for-the-conservation-of-water-and-energy>, 2014)

The UAE has launched the National Water and Energy Demand Management Program to enhance conservation efforts. The Federal Cabinet-approved program aims to improve the efficiency of the three most energy-intensive sectors: transportation, industry, and construction by 40%. The UAE in collaboration with strategic federal and local partners plans to implement various initiatives that adhere to the best international standards in the largest water and energy efficiency campaign.

The program launched several initiatives to reduce energy consumption and achieve specific targets by 2050. These targets include reducing energy demand by 40%, increasing the contribution of renewable energy by 50%, and expanding water reuse by 95%. The UAE is at the forefront of using artificial intelligence to shape the future of the oil and water sectors over the next 50 years, with a focus on demand management and rationalization of consumption.

In Dubai, the Clean Energy Strategy aims to produce 75% of energy requirements from clean sources by 2050, with a focus on becoming a global hub for clean energy and a green economy. The strategy includes key pillars such as infrastructure, legislation, financing, capacity building, and environmentally friendly energy.

In parallel, the Dubai Demand Side Management Strategy 2030 aims to achieve a 30% reduction in electricity and water demand by 2030. Dubai achieved significant savings in 2020, with an 11.8% reduction in electricity and a 7.9% reduction in water consumption. These savings amount to 5.4 terawatt-hours of electricity and 9.9 billion imperial gallons of water, equivalent to reducing 11.5 million metric tons of carbon dioxide emissions or removing 1.2 million vehicles from Dubai's roads for two years. According to the Dubai Supreme Council of Energy (DSCE), Abu Dhabi's Demand Side Management and Energy Efficiency Strategy 2030 aims to reduce electricity consumption by 22% and water consumption by 32% by 2030.

The program brings together all federal and local stakeholders in the UAE to achieve the objectives of the UAE Energy Strategy 2050 and the UAE Water Security Strategy 2036 to ensure the security of supply in the energy and water sectors through long-, medium- and short-term effective plans (2.1).



Effective Use of Renewable Energy 2020

2.2 Biodiversity Preservation

• Sustainable Wildlife in the UAE:

The Sustainable Wildlife Initiative includes three main pillars to ensure the sustainability of wildlife in the country, raise public awareness of biodiversity-related issues, and achieve international goals such as the Aichi Targets 2021 and the Sustainable Development Goals.

The two pillars are:

1. National Red List Project.
2. Important Bird Areas Program.

The Sustainable Wildlife Initiative seeks to:

1. By 2020, the UAE will use the IUCN Red List methodology to produce a comprehensive national Red List assessment and index covering birds, mammals, amphibians, reptiles, selected marine species (sharks, rays, corals), and plants in the UAE.
 - Calculate the Red List Index for specific taxonomic groups.
 - Enhance and review the national inventory of Important Bird Areas (IBAs) in the UAE and developing a conservation plan for these identified sites.
2. Actively identifying and continuously monitoring Important Bird Areas (IBAs) in the UAE.
 - ◊ Assisting in developing expertise and capacity building within the UAE in identifying, monitoring, and conserving Important Bird Areas (IBAs).
 - ◊ Developing an increased understanding of key biodiversity areas.
 - ◊ Supporting the promotion of ecotourism in the UAE to enhance biodiversity and support conservation initiatives.



(<https://gifts.worldwildlife.org/gift-center/gifts/Species-Adoptions/Caracal.aspx>, 2023)

3.2 Achievements

1. The UAE National Red List of Mammals

The UAE boasts diverse ecosystems including terrestrial landscapes such as deserts, mountains, marine and coastal habitats, supporting eight mammal species (59 terrestrial and 19 marine). There are 20 terrestrial species of which 6 are uncertain, 10 introduced, and 4 feral, with a confirmed number of 58 native species. While no mammal species is exclusive to the UAE, the Arabian tahr (*Arabitragus jayakari*) lives in the Hajar Mountains of the UAE and Oman, five species live in the Arabian Peninsula, including the Arabian oryx (*Oryx leucoryx*), Arabian gazelle (*Gazella arabica*), Arabian sand gazelle (*Gazella marica*), Wagner's jerboa (*Gerbillus Dasyurus*), The Arabian rat (*Meriones arimalius*).

A Red List Index (RLI) analysis reveals that mammals in the UAE generally face a higher level of threat than the global average. However, a positive shift has occurred in RLI since 1996, primarily due to direct conservation interventions that have improved the status of three species. This positive trend in RLI contrasts with the global scenario, with an overall decline in the conservation status of mammal species.



Camels are an essential part of the rich heritage of the United Arab Emirates
(<https://gulfnews.com/uae/camels-a-key-part-of-uaes-rich-heritage-1.603548>, 2010)



Wildlife in the United Arab Emirates

(<https://insurancemarket.ae/travel-insurance/plan-your-visit-to-sharjah-zoo/>, 2022)

Wild Mammals

The confirmed native mammals include 39 species in the UAE, bats account for 30.7%, carnivores 28.2%, and rodents 20.5% of the total. Although no mammal species are found exclusively in the UAE, one species, the Arabian tahr (*Arabotragus jayakari*), lives in the Hajar Mountains of the UAE and Oman. In addition, five species live in the Arabian Peninsula, including the Arabian oryx (*Leucoryx*), the Arabian gazelle (*Gazella arabica*), the Arabian sand gazelle (*Marica marica*), the Wagnerian gerbil (*Gerbillus dasyurus*), and the Arabian rat (*Meriones arimalius*).



Arabian Oryx

(<https://insurancemarket.ae/travel-insurance/plan-your-visit-to-sharjah-zoo/>, 2011)

Marine Mammals

The marine mammal species in the UAE include 19 species, consisting of 18 cetaceans and one sirenian species. The 3-year-recent surveys of the east coast have shown the first documented records of two species of dolphin. Marine mammal groups include species adapted to both coastal and deep-water environments. The waters of the Gulf in the UAE are home to large numbers of at least four species, namely the dugong, the Indo-Pacific humpback dolphin (*Sousa Plumbea*), which is the largest subgroup worldwide, the Indo-Pacific finless porpoise (*Neophocaena Phocaenoides*), and the Indo-Pacific bottlenose dolphin (*Tursiops Aduncus*).

The fin whale (*Balaenoptera physalus*) was previously thought to be in the waters of the UAE based on skeletal evidence. However, a re-analysis of the available evidence has shown that this belief is incorrect and that the fin whale does not inhabit the waters of the UAE or the Arab region.



(<https://phys.org/news/2018-12-critically-endangered-marine-turtles-climate.html>, 2018)

The UAE National Red List of Reptiles and Amphibians

The UAE has diverse habitats, including deserts, mountains, and marine environments, and harbors a rich diversity of herpetofauna. Currently, the UAE has documented 76 species of amphibians and reptiles. Three species are (*Hydrophis viperinus*, *Hemidactylus flaviviridis*, *Chalcides ocellatus* ssp. *ocellatus* (included), and one sea snake (*Hemidactylus persicus*) lacks confirmed records within the UAE.

The UAE has 72 confirmed local species and subspecies including only one terrestrial species, *Asaccus caudivolvulus*, which is now living in the country. In addition, 13 species live in the Hajar Mountains, shared with Oman, and 20 species exclusive to the Arabian Peninsula.

The UAE also has native herpetofauna species 3 of which (4.2%) are classified as Critically Endangered, nine species (12.5%) as Vulnerable, one species (1.4%) as Near Threatened, 50 species (69.4%) as Least Concern, and nine species (12.5%) as Data Deficient. Habitat loss is the dominant threat to wild animals in the UAE.



(<https://en.wikipedia.org/>)



(<https://reptilesmagazine.com/listings/lizard-care/frog-eye-gecko>)

2. Important Bird Areas Program

In 1994, the regional inventory of Important Bird Areas (IBAs) identified 19 sites in the UAE, consisting mainly of offshore islands and coastal sites, with a limited number of inland sites. The updated national inventory now includes 30 Important Bird Areas (IBAs), reflecting the intensive efforts to protect ecological areas across the country. This comprehensive program, which builds on the accumulated fieldwork and knowledge of biodiversity since 1994, assesses the status of these priority sites, identifies existing threats, and proposes necessary conservation measures.

The identification and conservation of these sites represents a major step in fulfilling the UAE's international commitments, particularly the Convention on Biological Diversity, the Convention on Migratory Species (CMS), including the Raptors Memorandum of Understanding, the United Nations Convention to Combat Desertification (UNCCD), and the Convention on Wetlands (Ramsar Convention). These efforts underscore that the United Arab Emirates is committed to preserving its natural heritage and supporting biodiversity global initiatives (2.3).



(<https://www.theguardian.com/>, 2014)

The Dubai Desert Conservation Reserve is the first national park in the United Arab Emirates, reflecting the Dubai government's recognition of the importance of preserving the distinctive desert habitats of many endangered plant species. The reserve has evolved into a protected desert environment through careful, continuous, and strategic rehabilitation efforts. This unique sanctuary protects endangered species and preserves the natural desert habitat and heritage. As a member of the following organizations, the Dubai Desert Conservation Reserve aligns with global conservation initiatives:

- International Union for Conservation of Nature IUCN: A global organization working

to find practical solutions to the world's most important environmental and development challenges.

- United Nations Environment Program: An organization that provides leadership and fosters partnerships to enable nations and individuals to improve their quality of life while safeguarding the well-being of future generations.

In collaboration with prestigious institutions, the University of Malaga in Spain, Sorbonne University Abu Dhabi University, and Zayed University, the Dubai Desert Conservation Reserve leverages its expertise and specialization in research, training, development, and knowledge dissemination to achieve conservation goals.



Dubai Desert Conservation Reserve

(https://www.tripadvisor.ca/Attraction_Review-g2630221-d811036-Reviews_Dubai_Desert_Conservation_Reserve-Emirate_of_Dubai.html,2021)

The UAE's biodiversity has promoted ecotourism in the region. With 14% of the total land area allocated to protected areas, the UAE offers a variety of options for tourists to visit and explore its rich biodiversity.

To promote ecotourism and highlight the wonders of nature in the UAE, the Ministry of Climate Change and Environment has launched an e-book. The publication highlights the distinctive natural features across all seven emirates, encouraging awareness and appreciation of the country's environmental treasures.

As part of a coordinated conservation approach, the UAE successfully bred and re-introduced several endangered species, including the Arabian Oryx, Houbara Bustard, and many other birds to their natural habitats. These initiatives aim to re-establish these species and protect them from extinction.



Houbara



Arabian Oryx

(<https://www.diramakini.co.tz/2022/11/international-fund-for-houbara.html>, 2022)

Ecological reserves such as Al Wathba Wetland Reserve and Al Qurm National Park encourage and promote ecotourism, making more people aware of the unique habitats found in the country (5.2).



Al Wathba Wetland Reserve, Abu Dhabi

(<https://thestrongtraveller.com/2021/08/16/the-6-must-visit-natural-attractions-of-abu-dhabi/>, 2021)

To empower future generations with awareness and knowledge about the local unique desert habitats, the UAE has taken the right steps to ensure that natural habitats are well preserved leading to a balanced ecosystem.

Federal Law No. 24 of 1999 on the Protection and Development of the Environment is a comprehensive framework in the UAE to ensure environmental protection and conservation of biodiversity. This legislation encourages and promotes the rational use of natural resources, to maintain a balanced ecosystem.

To conserve native plant species, the Sharjah Seed Bank and Herbarium actively explored and protected the plants in the UAE. The efforts include herbariums, seed collections, research

initiatives, genetic diversity studies, DNA barcoding, capacity building for seed banks, seed science, and molecular genetic research.

In addition, the UAE identified the protected areas to ensure the conservation of critical ecosystems in their natural habitats. The UAE also established reserves to control activities that may threaten endangered species. The Sheikh Zayed Protected Areas Network, launched in 2018, represents an important commitment by the UAE to protect and conserve wildlife.



Herdsman Lake - Urban Wetland, Australia

(<http://wabirdingblog.blogspot.com/2014/06/herdsman-lake-urban-wetland-hotspot.html>, 2014)

3. Waste Management

3.1: Waste Management

To ensure sustainable development while preserving the environment, the UAE has developed a vision for the National Agenda 2021 to achieve an ideal balance between economic and social development. In this regard, the agenda focuses on improving air quality, increasing the contribution of clean energy, preserving water resources, and implementing green growth plans. Therefore, the pioneering telecommunications infrastructure will allow the UAE to become a leader in providing smart services. For this purpose, the UAE has set key performance indicators to measure its performance against its 2021 goals, which are as follows:

- Reducing the water scarcity index;
- Improving the air quality index;
- Improving the quality of air transport infrastructure;
- Improving the proportion of treated waste to the total generated waste;
- Improving the share of clean energy contribution;

- Improving Network Readiness Index (IT & Telecom Sectors);
- Improving Port Infrastructure Quality;
- Improving Logistics Performance Index;
- Improving Overall Infrastructure Quality (such as Transport, Electricity, Telephone Lines);
- Reducing Time Taken to Get a Loan/House from the Government of the UAE;
- Improving Online Services Index.

The UAE Recycling Guide

The UAE has introduced the latest technologies and activities to control and improve waste management. The UAE waste management has also taken the following steps:

- Reducing waste. Thinking before using any single-use disposable item;
- Reusing waste. Instead of throwing away unwanted items or waste, you can re-use and recycle your waste;
- Donating unwanted items;
- Recycling.

The UAE widely promoted and implemented recycling practices, and the recycling centers have provided opportunities for residential, government, and industrial sectors to recycle their waste over the past decade. The municipalities provide trash and recycling bins. Despite these initiatives, the UAE still faces major challenges, as recyclable waste often ends up in landfills, or worse, in the oceans, placing a significant burden on the natural ecosystem, of which humans are an integral part. The lack of public awareness has led to undesirable behaviors, as many individuals may not fully understand the impact of their decisions. Small choices, such as disposing of items in trash bins instead of recycle bins, result in wasteful consumption of valuable resources. The awareness of the consequences of such decisions is crucial to promoting responsible waste management and environmental stewardship.

The strategic steps for waste disposal

To minimize the negative impact on the ecosystem, it is essential to learn sustainable waste management practices and follow the correct steps for waste disposal.

1. Reduce Waste

The UAE residents should think before using any single-use item. Then they should replace these items with reusable items to reduce waste. Then they should follow the guidelines on reducing single-use plastic waste and making some simple lifestyle changes.

2. Reuse Waste

Instead of throwing away unwanted items or waste, people should reuse them through general waste recycling. This is a great resource for reusing household items. To experience a zero-waste lifestyle like the average family, it is recommended to follow a quick knowledge of reuse/recycling.

The available containers and shopping reusable bags are recommended. This has been practiced for 1.5 years and it has been found that it is important to educate the public to avoid taking most of the packaging materials home, which may reduce the need for frequent recycling.

3. Donate unwanted items

Most of the time, the public throws away items that are still working well or in good condition simply because they want to buy new ones or items that are no longer needed. It is important in this case to remember that one man's trash is another man's treasure, and donating these items in good condition to charities can yield good results. The government has encouraged many charities and organizations, where the public can donate unwanted items.

4. Recycling

Waste segregation is the most effective way in the recycling process. Guides will contribute to a better understanding of the public when provided with the right guidance. This guide, if distributed to all sectors, can help in identifying the items that should be recycled and should not be recycled.



Waste Management UAE's Vision for a Sustainable Future

(<https://www.linkedin.com/pulse/waste-management-uae-vision-sustainable-future-mxnnf>, 2023)

The UAE has witnessed remarkable economic and infrastructural development in recent years. Alongside this progress, the country has been a pioneer in addressing environmental challenges, particularly in the field of waste management. Recognizing the importance of sustainable practices, the UAE has implemented innovative strategies and technologies to manage waste effectively, with a clear vision for a cleaner and greener future.

The UAE has faced distinct challenges in waste management due to rapid urbanization and population growth. Historically, the UAE relied heavily on landfill disposal; the country has shifted its focus towards more sustainable practices, investing in advanced waste treatment technologies, including recycling and waste-to-energy solutions. The UAE established several waste-to-energy plants. These plants convert municipal solid waste into electricity and reduce reliance on traditional fossil fuels and the carbon footprint.

The UAE waste management vision includes the integration of smart technologies and data-driven solutions. The waste bins and collection vehicles-equipped sensors optimize routes, improve efficiency, and reduce costs. This data-driven approach, coupled with the Internet of Things (IoT), creates a connected waste management system, enabling real-time data collection to monitor waste generation patterns and enhance decision-making.

In addition to technological advancements, the UAE emphasizes the importance of fostering a culture of environmental responsibility among its residents. The public awareness campaigns and educational programs encourage waste reduction, recycling, and responsible disposal. Circular economy initiatives, which support the reuse and recycling of materials, are in line with the UAE's commitment to creating a closed-loop system that reduces waste generation and minimizes environmental impact.

The UAE has taken steps to implement a ban on single-use plastics to address plastic pollution and promote sustainable practices. This commitment to environmental stewardship reflects a dedication to global efforts to reduce plastic waste. The UAE envisions a future without waste and plans to develop the waste management infrastructure by expanding recycling facilities, investing in innovative waste sorting technologies, and developing sustainable packaging materials.

Expert4Recycling stands out as an ideal partner in advancing the UAE's waste management goals, specializing in sorting and recycling various types of waste. Their expertise aligns seamlessly with the UAE's overall waste management strategy. The company significantly

provides innovative solutions that align with the UAE's vision for a sustainable future through active participation in conferences and engagement with key stakeholders.

The UAE's commitment to sustainable waste management demonstrates a dedication to creating a cleaner and healthier environment. Through technological integration, public engagement, and circular economy initiatives, the country is paving the way for a future to minimize waste, maximize resources, and maintain ecological balance for the next generations (3.1).



(<https://www.haultail.com/>, 2019)

3.2 Circular Economy Practices:

The UAE has green-lighted 22 policies to accelerate the country's transition to a circular economy. The UAE is committed to sustainable economic development. The UAE also focuses on manufacturing, food, infrastructure, and transportation sectors. The policies aim to reduce the extraction of natural resources, minimize waste, and regenerate natural systems. The Circular Economy Council-approved policies are in line with the UAE's dedication to achieving net zero carbon emissions by 2050. The circular economy principles, which emphasize sustainable materials, products, and renewable energy, could generate \$26 trillion in economic benefits by 2030.

The UAE's circular economy initiatives include waste-to-resource, reuse, artificial intelligence, remanufacturing, biomaterials, and remediation. These efforts are in line with the UAE's Circular Economy Policy 2021-2031, which focuses on sustainable economic practices and resource efficiency.

The Circular Economy Council, which consists of representatives from government entities, private sector companies, and international organizations, leads programs, projects,

and incentives to promote the circular economy enhance the UAE's competitiveness and attract investment into this field. The UAE's commitment to circular economy principles reflects its dedication to environmental stewardship and long-term economic prosperity (3.2).



(<https://icscareergps.com/>,2022)



(<https://eatableadventures.com/circularity-in-action-showcasing-game-changing-foodtech-initiatives/>,2023)

4. Green Buildings and Urban Planning

4.1: Sustainable Architecture

- **Sustainable Architecture in the UAE:**

The UAE, known for its opulent skyscrapers and architectural marvels, is undergoing a transformation that seamlessly blends luxury and sustainability. This commitment to eco-friendly designs extends beyond a mere trend, marking a fundamental change in the national approach to urban development. Recently, Abu Dhabi has positioned itself as a global leader in sustainable architecture, leading the way in the real estate sector with cutting-edge, environmentally conscious developments.

Regional developers and architects embrace sustainable practices in response to the growing demand for environmentally responsible and energy-efficient structures. This collective effort aims to shape a greener, more sustainable future, reflecting the UAE's dedication to aligning luxury with environmentally conscious design principles.

- **Pioneering Vision**

The UAE Vision 2021 National Agenda emphasizes sustainable development, going beyond economic considerations to include a holistic approach that balances rapid growth with long-term environmental well-being. At the heart of this vision is the construction and real estate sector, a fundamental pillar of the country's economic fabric, which plays a pivotal role in

achieving and advancing these sustainable goals.



(<https://www.azom.com/>, 2022)

- **Focus on Energy Efficiency**

Abu Dhabi's hot climate significantly requires energy consumption to cool buildings. Sustainable architecture addresses this challenge by prioritizing energy efficiency through the implementation of passive cooling techniques, smart design, and efficient building materials. Buildings designed with well-insulated facades, shading devices, and reflective surfaces can significantly reduce energy consumption and carbon footprint.

- **Integration of Renewable Energy**

The integration of renewable energy sources, especially solar energy, plays a pivotal role in sustainable architecture. With its year-round sunlight, Abu Dhabi is an ideal location to harness solar energy. Many sustainable developments are taking advantage of this opportunity by incorporating solar panels and other renewable energy technologies to power buildings. This approach reduces reliance on conventional energy sources, contributes to lowering greenhouse gas emissions, and supports the principles of sustainable and environmentally friendly design.



(<https://taiyangnews.info/>, 2022)

- **Water Conservation Strategies**

In response to the challenges of water scarcity in the desert region, Abu Dhabi has adopted a range of water conservation strategies in the field of sustainable architecture. These initiatives include rainwater harvesting systems, greywater recycling, and efficient irrigation techniques for landscaping. By reducing water waste, sustainable buildings play a critical role in alleviating pressure on local water resources and promoting overall environmental sustainability.



Irrigation methods

(<https://krishijagran.com/agripedia/irrigation-system-know-the-different-types-and-various-methods/>,
2023)

- **Green Building Materials**

Sustainable architecture encourages the use of environmentally friendly building materials, such as recycled, locally sourced, and low-emission products.

These materials reduce the environmental impact and enhance the overall indoor air quality of buildings, which keeps the health and well-being of their occupants.



Masdar City, Abu Dhabi

(<https://www.bigstockphoto.com/image-300223924/stock-photo-masdar-city%2C-abu-dhabi%2C-uae-april%2C-2019-the-city-is-designed-in-sustainable-and-smart-way-that-pr>, 2019)

- **LEED Certification**

- Leadership in Energy and Environmental Design (LEED) certification has become a hallmark of sustainable buildings worldwide.
- Abu Dhabi's real estate sector has seen a surge in LEED-certified projects, indicating a commitment to sustainable practices and environmental responsibility.
- LEED buildings are designed to manage waste, reduce energy consumption, and provide healthier indoor environments for their occupants.

- **Urban Planning and Green Spaces**

Sustainable architecture in Abu Dhabi goes beyond individual buildings; it encompasses comprehensive urban planning that prioritizes green spaces, pedestrian-friendly pathways, and sustainable transportation options.

Creating vibrant, walkable neighborhoods with ample green space and sustainable developments, promotes a healthier and more enjoyable urban living experience.

The sustainable architecture in Abu Dhabi's real estate sector is a testament to the region's commitment to creating a greener and more sustainable future.

LEED certification, green building materials, urban planning, and sustainable developments reshape Abu Dhabi's urban environmental landscape. Abu Dhabi focuses on energy efficiency, renewable energy integration, and water conservation.

As these eco-friendly practices continue to gain momentum, Abu Dhabi's real estate sector is setting an inspiring example for the rest of the world to follow in its quest for a more sustainable and environmentally conscious future (4.1).



Seven Heavens, Al Barari, Dubai

(<https://dubai-property.investments/property/seventh-heaven/>)

4.2 Sustainable Smart Cities

Abu Dhabi and Dubai have been ranked as the smartest cities in the Middle East and North Africa region according to the “Smart Cities Index 2021”. The index developed by the Institute for Management Development (IMD), in collaboration with the Singapore University of Technology and Design (SUTD), surveys residents of ranked cities to assess smart infrastructure and services covering health, safety, mobility, activities, opportunities, and governance.

- What is a Smart Sustainable City?**

According to the International Telecommunication Union (ITU), a smart sustainable city is an innovative urban center that uses information and communication technologies (ICT) and other methods to improve quality of life, efficiency of urban operations and services, and competitiveness. At the same time, it meets the needs of current and future generations in economic, social, and environmental aspects.

In 2016, ITU, in collaboration with the United Nations Economic Commission for Europe (UNECE) and UN-Habitat, launched the “United for Smart Sustainable Cities” (U4SSC) initiative. This initiative has developed key performance indicators (KPIs) for smart sustainable cities (SSC) to set benchmarks for assessing the contribution of ICT to making cities smarter and more sustainable. The KPIs provide cities with self-assessment of alignment with and achievement of the Sustainable Development Goals.

- Sustainable Smart Cities in the UAE**

The UAE government aims to ensure sustainable development, preserve the environment, and achieve economic and social development balance. Abu Dhabi and Dubai are planning and developing several sustainable smart cities.

- Smart Cities Index**

For the second year in a row, Abu Dhabi and Dubai have been ranked as the smartest cities in the Middle East and North Africa region, according to the Smart Cities Index 2021. While Abu Dhabi ranks 28th, Dubai comes 29th, out of 118 cities. Compared to 2020, both have advanced 14 places globally. The top three smart cities are:

1. Singapore (1st Rank)
2. Zurich (2nd Rank)
3. Oslo (3rd Rank)



Smart City, Singapore

(<https://theethicalist.com/worlds-10-most-sustainable-cities/>, 2022)



Smart City, Zurich, Switzerland

(<https://www.emea.marriott.com/en/travel-tips/a-guide-to-zurich-what-to-do-and-where-to-stay>, 2016)



Smart City, Oslo, Norway

(<https://www.ks.no/link/162a07dc946e4801b743c5968483e512.aspx>, 2018)

- **Smart Cities Index 2021**

The International Institute for Management Development (IMD) and Singapore University of Technology and Design (SUTD) have released the third annual IMD-SUTD Smart Cities Index (SCI). The index highlights that the pandemic has significantly influenced city dwellers' perceptions of technology addressing urban challenges and accelerated digital transformation.

The index survey in July 2021, covered nearly 15,000 residents from 118 cities globally.

The index asked the respondents to rate their cities in areas such as health and safety, mobility, activities, career and education opportunities, and governance.

- **Abu Dhabi Efforts**

The Abu Dhabi Economic Vision 2030 outlines a strategic shift from a reliance on natural resources to a knowledge-based economy, with a focus on innovation and the export of advanced technologies. This shift aims to diversify the economy by exploring new economic alternatives, with a strong focus on developing a smart city.

The third priority of the Abu Dhabi Economic Plan 2030 involves developing appropriate infrastructure while maintaining environmental sustainability. The government is committed to creating a professionally designed, well-managed urban environment in the emirate's towns and cities. This includes implementing world-class traffic and transportation systems. Masdar City is a model for this vision, serving as a regional and global model for smart and sustainable cities.

Masdar City

In 2006, Abu Dhabi began planning Masdar City. The Masdar Master Plan included key components such as:

- Optimizing solar energy by maximizing efficiency gains.
- Integrating all aspects of city life by providing minimal use of transportation.
- Reducing the height of construction and buildings.
- Providing a high quality of life in an efficient ecosystem smartly.

Masdar City represents the first attempt in the Middle East to build a sustainable city. Masdar City aims to reduce energy and water use and waste generation. It uses a combination of technology, architectural designs, and solar power. Minimizing energy use is one of the key steps to preserve the environment.

For example, the use of low-flow sprinklers and smart water meters ensures the conservation of water. Masdar City's architecture ensures that streets and homes are cooler than they would be otherwise. In addition, the use of high-efficiency appliances conserves energy.

Masdar City is home to the headquarters of the International Renewable Energy Agency, an intergovernmental organization that supports countries in transition to a sustainable energy future.



Masdar City Headquarters

(http://smithgill.com/work/masdar_headquarters/, 2018)

Zayed Smart City Project

In 2018, the Abu Dhabi Department of Urban Planning and Municipalities began the pilot phase of a five-year plan for smart cities and artificial intelligence (2018-2022) (Zayed Smart City Project). This project is designed to leverage information technology and the Internet of Things (IoT) to manage infrastructure effectively. Zayed Smart City Project promotes Abu Dhabi as a smart city with innovative technologies for urban development and sustainability.



Zayed Smart City, Abu Dhabi

(<https://www.woodsbagot.com/global-studio/news/sustainability/cundall-conversations-richard-fenne-unveils-sustainable-visions-driving-urgent-climate-action-ahead-of-cop28/>, 2023)

• Dubai Efforts

The Dubai Plan 2021 aims to transform Dubai into a smart and sustainable city. The Smart City Project in Dubai includes a strategic vision to enhance nearly 1,000 government services, focusing primarily on six main sectors: transportation, infrastructure, communications, economic services, urban planning, and electricity. The local government implements various initiatives that are classified as follows.

- ◊ Open and easy access to data.

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- ◊ Smart transportation.
- ◊ Optimizing energy resources.
- ◊ Smart parks and beaches.
- ◊ Police smartphone apps.
- ◊ New main control room.

As part of the Dubai Smart Cities Transformation Initiative, the government integrates all government entities into one entity. It simplifies customer service smoothly and efficiently. The initiative projects focus on implementing smart applications and devices across three main tracks:

- ◊ Smart living: It deals with health, education, transportation, communications, public utilities, and energy services.
- ◊ Smart economy: It deals with the development of smart companies, port services, smart exchanges, and smart jobs.
- ◊ Smart tourism: It deals with a smart and comfortable environment for visitors, including visas, aviation, smart gates, and smart hotel services.

Some sustainable smart cities under construction in Dubai are as follows:

Sustainable City

The Dubai Land Department- Gulf Real Estate Awards recognized the Dubailand Sustainable City as the happiest community in the GCC. This multi-use township runs entirely on self-produced solar energy. Its homes, offices, and other properties are equipped with energy-saving devices. The community is car-free, has 10,000 trees, and hosts organic farms.

Dubai Silicon Oasis

The Silicon Oasis project reflects the ambitious Dubai Plan 2021, which aims to develop the emirate into a smart city. In January 2016, Dubai Silicon Oasis achieved a remarkable 31% reduction in cumulative energy consumption. This exceeded the target of the Dubai Integrated Energy Strategy 2030, which aims to reduce energy consumption by 30%.



Dubai Silicon Oasis, Dubai

(<https://www.mediaoffice.ae/en/news/2022/March/01-03/Dubai-Silicon-Oasis-kicks-off-SANDBOX, 2022>)

Dubai South

Dubai South is the site of Expo 2020. Sustainability was a theme of Expo 2020, with half of the electricity used at the Expo came from renewable sources, and half generated on-site. The government largely used the reused materials in the permanent construction infrastructure.



Dubai South

Desert Rose City

Desert Rose City will be located in the Al Ruwayyah area along the Dubai-Al Ain Road. The city will adopt a mixed-use concept. The city's wonderful aesthetic design is inspired from the desert rose. It enhances energy efficiency and reduces electricity consumption. The city is committed to self-sustainability, relying on locally regenerated renewable energy sources. In addition, Desert Rose City will feature a state-of-the-art waste recycling facility. The residential complexes will include 20,000 units dedicated to Emiratis and an additional 10,000 units for expatriate residents.

- Sharjah Efforts

Sharjah Sustainable City

Sharjah Sustainable City is the first fully integrated net-zero energy community that aims to create a world-class sustainable and happy community in the UAE.



Sharjah Sustainable City

(<https://selecthouse.co/uae/en/sharjah-city/sharjah-sustainable-city/>, 2023)

5. Climate Change Action

5.1: National Climate Plans

- UAE National Climate Change Plan 2017-2050

Climate change affects all economic sectors and all segments of society. Scientific evidence underscores the urgent need to step up climate action.



(<https://www.sciline.org/climate/climate-change/agriculture/>, 2022)

The UAE is firmly committed to addressing climate change, recognizing its pervasive impact on society and the environment. The UAE's dynamic economy, and visionary leadership, positions it positively to achieve its development aspirations. In line with the UAE Vision 2021, the government makes efforts to adopt sustainable growth, preserve the environment, and enhance the overall quality of life. The National Climate Change Plan "Climate Plan",

is a comprehensive framework that promotes climate action in the UAE. It sets out strategic priorities that promote both mitigation and adaptation.

The UAE launched the National Climate Change Plan 2017-2050 to integrate national policies, strategies, and initiatives into climate action. It is a roadmap to encourage people across the country to take action on climate mitigation and the sustainable use of natural resources.



Climate Change in the UAE

(<https://indianexpress.com/article/technology/science/flash-droughts-increase-globally-8631816/>, 2014)

- **Climate Change in the UAE**

Climate change poses a significant threat to the UAE, potentially hampering its growth. Projected impacts include extreme heat, storms, sea level rise, water stress, dust and sand storms, and desertification. Even small shifts in weather patterns can profoundly affect the nation's economic, environmental, and social fabric. Areas at risk include water, coasts, seas, dryland ecosystems, infrastructure, agriculture, food security, and public health.

Climate models-based projections indicate an estimated increase in the UAE's average annual temperature of 1.5–2°C by 2040. Coastal areas, in particular, face increased risks, with marine habitats experiencing increased temperatures and salinity, and infrastructure vulnerable to storm surges and sea level rise. In addition, the UAE anticipates food insecurity challenges and health conditions of extreme weather events.

The Paris Agreement, adopted at COP21 in 2015, is the cornerstone of global climate action. It aims to limit global temperature rise to below 2°C pre-industrial levels. The UAE, one of the first countries to adopt it, ratified the Paris Agreement in September 2016, affirming its commitment to mitigating and adapting to the effects of climate change.

The UAE adopts a sustainability agenda in line with the Sustainable Development Goals

(SDGs). SDG 13, which focuses on combating climate change and its impacts, is central to the nation's efforts. However, recognizing the interconnected nature of climate change with broader sustainability goals, the UAE also addresses relevant goals such as clean energy (SDG 7), sustainable economic growth (SDG 8), resource efficiency (SDG 9), sustainable consumption and production (SDG 12), and ecosystem health (SDGs 14 and 15). The entry into force of the Paris Agreement addresses climate change and reflects the global recognition of the need to act quickly in response to this critical challenge.

- **Green Agenda**

The UAE's climate plan enhances and expands the existing policy framework dedicated to green growth and sustainable development. Key reference points include the Green Agenda 2015 - 2030, which includes a variety of ongoing initiatives that specifically address climate change mitigation and adaptation. The UAE identifies successful Green Agenda initiatives to be replicated or expanded to enhance the UAE's climate resilience and sustainability.

Relying on current policies and initiatives, the Climate Plan aims to integrate climate considerations into broader sustainability efforts. This approach ensures a coherent and coordinated strategy in line with the UAE's vision for a sustainable, resilient, low-carbon future. Replicating or scaling up successful Green Agenda initiatives reflects a commitment to maximizing the impact of existing efforts and leveraging lessons learned in pursuit of climate action goals.

- **Climate Plan and Green Agenda**

The Climate Plan consists of the climate change-related initiatives under the UAE Green Agenda.

Many of the 96 Green Agenda initiatives are directly linked to climate change mitigation and adaptation and can be replicated or scaled up in the following sectors:

- **Water and Electricity**

Energy efficiency is the most rational approach to a green economy as the savings measures are generally much less costly than other approaches.



(<https://taiyangnews.info/>, 2022)

- **Oil and Gas**

The oil and gas industry accounts for around 30% of the UAE's GDP, underscoring its significant economic contribution. Despite ongoing efforts to diversify the economy, hydrocarbons will continue to play a crucial role. Therefore, the UAE must enhance the sector's performance to ensure sustainable economic vitality.



Oil and Gas Industry in UAE

(<https://english.alarabiya.net/>, 2023)

- **Buildings**

In the UAE, buildings account for around 80% of electricity consumption. Despite the UAE having building codes in place to promote energy efficiency, it needs additional efforts to retrofit older structures. Therefore, the UAE can significantly save energy and water in the building sector.



Dubai City

(<https://moderndiplomacy.eu>, 2018)

- **Transport**

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The UAE's position as a global logistics hub supported by a robust transport network facilitates the rapid and efficient movement of people and goods. Effective management of greenhouse gas emissions from the transport sector will contribute to achieving environmental goals and bring broader economic and social benefits.



Dubai Metro

(<https://planningdubai.ae/burj-khalifa-metro-station/>, 2020)

- **Waste**

The UAE effectively manages waste to mitigate climate change especially when the UAE experiences strong economic and population growth. The UAE Vision 2021 Green Agenda includes a target to remove 75% of waste away from municipal landfills.



(<https://www.khaleejtimes.com/local-business/recycling-insufficient-to-combat-current-plastic-pollution-experts-say>, 2021)

- **Industry**

The UAE's investments in the manufacturing sector significantly represent economic diversification. However, most manufacturing activities such as aluminum, steel, and cement production are energy intensive. Therefore, the UAE can use other efficient production systems.



(<https://www.flickr.com/photos/nestle/5243954183>, 2023)

- **Tourism**

Tourism is one of the largest and fastest-growing sectors in the world, the UAE tourism contributes significantly to the national GDP, creates jobs, and attracts capital investment. Therefore, the UAE must effectively and sustainably manage the rapid growth of this industry.



Tourism in the United Arab Emirates

(<https://travel.economictimes.indiatimes.com/news/visas-and-passports/vfs-global-processes-40000-uae-visa-applications-from-india-since-dubai-border-reopening/90366634>, 2022)

- **Agriculture and Fisheries**

The UAE is highly vulnerable to climate change and climate-resilient agriculture and fisheries are important to ensure food security and address key challenges such as limited arable land, extreme heat, high salinity, water scarcity, and high dependence on food imports (5.1).



(<https://www.anthropocenemagazine.org/2017/08/by-farming-fish-in-the-ocean-the-world-could-far-surpass-its-seafood-needs/>, 2022)

5.2 Combating Desertification

The UN Sustainable Goal (SDG) 15 urgently protects, restores, and promotes sustainable use of terrestrial ecosystems. Key targets include sustainable forest management, combating desertification, and reversing land degradation and biodiversity loss. Desertification, land degradation, and drought threaten national economic and social development, requiring effective land management practices. Desertification includes land degradation in arid, semi-arid, and dry sub-humid areas, influenced by factors such as climate variability and human activities. This issue affects a large part of the world's population, 70% of drylands, and 25% of the world's total land area. The UAE urbanization plans take into account the potential impact on biodiversity and the environment.

Desertification refers to land degradation, particularly in dry areas, resulting in a transformation in the state of the land. In the UAE, land degradation is influenced by many natural and human factors, including wind erosion, salinization, waterlogging, loss of vegetation cover, urban expansion, excavation, and landfilling.

The rapid urbanization and encroachment on arable land have put continuous pressure on natural resources. The increase in population and changes in food consumption patterns contribute to the spread of land degradation and desertification.

Nearly 80% of the UAE's land area is desert, especially in the Western Region. Since the country lacks natural primary forests, the government made great efforts to establish forests through plantation initiatives. These efforts aim to address and mitigate the impact of desertification on the environment.



(<https://www.flightcentre.co.nz/holidays/ae>, 2023)

- **Combat Desertification Initiatives**

National Strategy to Combat Desertification 2014 - 2021

The UAE is committed to protecting the natural environment through preventive measures, including reducing carbon emissions and implementing regulatory measures to preserve the ecosystem. Combating desertification, the UAE employs modern technologies and conducts scientific research to protect native plants, enhance biodiversity, and reduce groundwater depletion. This involves implementing agricultural policies that promote effective water management practices.



(<https://sustainabilitykiosk.com/the-importance-of-student-engagement-beyond-cop21-symposium/>, 2023)

One of the most notable achievements in the UAE's efforts to combat desertification is the expansion of forest areas, which increased from 245,000 hectares in 1990 to 322,600 hectares in 2015. In addition, mangrove-planting initiatives have shown steady growth, with an estimated 800 to 1,200 hectares of planted mangroves since 1972.

Youth play a critical role in driving community initiatives to address climate change, including desertification. Masdar Institute of Science and Technology has established an outreach initiative known as Young Future Energy Leaders (YFEL). This program enables

students to participate in dialogues to combat climate change and develop innovative solutions. YFEL at Masdar Institute of Science and Technology seeks to raise awareness about the impacts of climate change through workshops, campaigns, and other activities. Fostering a sense of responsibility and encouraging proactive participation, this initiative supports a young generation of environmentally conscious leaders.



Young Future Energy Leaders

(<https://gulfnews.com/uae/environment/cop26-uae-irena-launch-1b-global-platform-to-accelerate-renewable-energy-1.1635970320904,2021>)

Conclusion

Finally, the UAE has developed the National Environmental Education and Awareness Strategy (NEEAS) 2015-2021, which consists of initiatives and programs for a healthy and sustainable environment. The national strategy has six objectives:

1. Educating youth and raising awareness that helps drive the UA sustainable future, and integrate the UAE's environmental priorities into school curricula, to enhance sustainability.
2. Improving social commitment to sustainability and environmental protection and creating collective responsibility. Engaging community ambassadors to conduct awareness programs for different communities.
3. Guiding companies and industries for environmental sustainability, and rewarding and recognizing socially responsible companies.
4. Engaging key government stakeholders to support environmental sustainability. Ensuring that all government entities are role models in creating sustainable practices.
5. Ensuring the effectiveness of environmental education and awareness efforts in the UAE. Following up on the progress of the strategy objectives periodically.
6. Building sufficient capacities to enable NEEAS and establish effective partnerships between the public and private sectors to implement the strategy's vision effectively.

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Chapter 11

Automation and Technological Development

Dr. Fakri Qaed Kharbash

Introduction

The world today is witnessing radical changes and transformations in various fields as a result of the Fourth Industrial Revolution. Tremendous technological progress has been made in the fields of communications, information technologies, and artificial intelligence. In addition, the government has made tireless efforts to enhance digitization and automation. Countries have motivated public and private institutions to keep pace with development and adopt modern technologies to improve the quality of life and develop their societies.

Among the most important responses to these developments, the countries have adopted automation, digitization, and modern technologies which are fundamental components of digital government efforts. They play a significant role in improving the pace of work, increasing productivity, diversifying sources of income, and improving government service channels to be available at any time and place. To this end, the UAE has developed strategies, plans, and initiatives that define the features of the future to achieve the UAE Vision 2071, starting with building a strong infrastructure that supports these developments and reaching tangible results that reflect progress in enhancing the quality of life and improving the performance of government services.

The UAE has made significant progress in this area, since its inception by the late Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace, as the UAE develops the communications and information technology sector. Technology has plays a vital role in economic and social development in various sectors such as education, health, financial economy, and disaster risk reduction. The UAE has also developed prioritized the development of education as the cornerstone for achieving comprehensive social development and adopting the means of progress in the fields of science and technology.

The late Sheikh Khalifa bin Zayed bin Sultan Al Nahyan, may his soul rest in peace, adopted the UAE's higher policy in the fields of science, technology, and innovation in November 2015. It aimed at activating sustainable innovation based on science and technology in order to build a future knowledge-based economy away from dependence on oil resources. The UAE identified seven strategic sectors within this policy: education, health, space, transportation, renewable and clean energy, technology, and water. The UAE identified 24 areas that represent opportunities and challenges, such as technology in the education sector, space sciences, financial technology, cybersecurity, technology in the health sector, and artificial intelligence.⁽¹⁾

His Highness Sheikh Mohammed bin Zayed Al Nahyan, the UAE President, may God protect him, affirmed in his first speech the state's approach to be achieved in the coming decades. He stressed the importance of science and technology in development and progress, as he said, "Our priorities also include developing our capabilities in the field of science and technology to achieve benefits for all economic and social sectors".⁽²⁾

Automation

The concept of automation

Automation is one of the concepts that emerged and became widespread in the thirties of the twentieth century, in the context of technological development. It means automatic operation or self-operation without human intervention, using electronic means based on modern technology such as computers and devices based on processors and software in various sectors to ensure the completion of procedures and work quickly and accurately, with the least possible errors and at the lowest cost. The use of these means in automation is an effective application of modern technologies in improving the quality and efficiency of services, simplifying business processes, and facilitating the exchange and transfer of information.⁽³⁾ It is an automated electronic medium, which is a program or electronic system for a computer that can act or respond to an action independently, in whole or in part, without the supervision of any natural person.⁽⁴⁾

Automation is an integrative process and requires a comprehensive set organizational, technical, and human capabilities⁽⁵⁾ and requirements that must be available in the concerned entity or institution, and is not limited to devices, systems, and software, but rather is a set of procedures and skills that extend to include the administrative and technical aspects. Among these aspects are:⁽⁶⁾

- Having a modern digital communications network.
- Prioritizing the tasks to be automated.
- Studying the entity archived information.
- Adapting the work environment.
- Ensuring the availability of the financial resources necessary to implement automation.
- Training employees on the use of information technology.
- Qualifying IT technical staff to implement automation.
- Keeping up on technical progress to keep pace with developments.⁽⁷⁾

The importance of automated services in the work environment:

The automation process in agencies or institutions has many advantages, including:⁽⁸⁾

- Facilitating and accelerating work procedures.
- Saving time.
- Prompting accuracy and clarity in work procedures and reducing the percentage of errors, due to the presence of support systems and data to support the decision.
- Achieving the principle of equality among clients.
- Enhancing communication between administrative agencies, and providing data and information.
- Eliminating burdens and administrative laxity.
- Increasing flexibility in providing services.
- Contributing to sustainability efforts.
- Increasing the happiness and satisfaction of customers and employees.

Despite the many advantages of automation, it includes several disadvantages such as decline in social communication and reducing the ability of direct persuasion.⁽⁹⁾ In addition, its implementation within an agency may not lead to a fundamental change and improvement in operational procedures, and these disadvantages can be avoided by taking initiatives to enhance direct communication and conduct accurate studies on the impact of automated processes and the feasibility of their implementation. In addition, some obstacles and challenges may stand in the way of developing automated services. They include the high cost of some modern devices and software, the difference in specifications between devices and systems within the institution, which may hinder the process of connection, the lack of awareness of the importance of automation and its role in developing tasks and work, and the fear of job replacement and restructuring.⁽¹⁰⁾ In addition to the security challenges associated with the use of technology, these obstacles can be overcome by adopting clear strategies, policies, and procedures that regulate the development process, and educating employees and customers about the benefits of automation.

Modern Digital Communications Network

As mentioned earlier, automation is an integrative process and requires comprehensive regulatory, technical, and human capabilities and requirements.⁽¹¹⁾ The modern digital communications network is vital to automation. The information and communication technology sector is the backbone of the development of the automated system. It requires a strong digital infrastructure, information and communications technology, and the provision of

devices, equipment, and other requirements for implementing the automation system.

The history of this sector dates back to before the establishment of the Union in 1971, initially, Dubai established the Government Telephone Company in 1960. It established wired and wireless networks and communication channels between the different emirates. It contributed to improving communications with other emirates, and this success led each emirate to set up its own telephone company. Sharjah established the Telephone and Electricity Company in 1961, Abu Dhabi established the Telephone and Telegraph Company in 1965, Fujairah established the Telephone and Electricity Company in 1968, and Ras Al Khaimah established the Telephone and Electricity Company in 1968. Despite the establishment of these telephone companies, services were limited during that period due to the small number of customers subscribing to the services, as the first telephone directory published by the Dubai Government Telephone Company in 1961 included only 494 customers.⁽¹²⁾

After the establishment of the union, with the expansion of oil discoveries, the development of state facilities, and an increase in population, the number of subscribers to these companies increased, and the government needed to regulate this vital sector.

In 1976, the late Sheikh Zayed bin Sultan Al Nahyan issued Federal Law No. 1 of 1976 to merge the various telecommunications companies under the umbrella of one legal entity, the Emirates Telecommunications Corporation, to control the quality of services.⁽¹³⁾ It was the cornerstone for driving the wheel of development in the telecommunications sector, as the corporation began its national progress in building the technical infrastructure in the country to serve various sectors.

The UAE established the first mobile phone network in the Middle East in 1982, and then the first fiber optic network in 1985 to keep pace with the growth in the number of subscribers, meet their needs, and prepare for the next generation of communication technologies. In 1994, Etisalat launched its first GSM (Global Systems for Mobile Communications) cellular network in the Middle East and changed the concept of business and advertising. The UAE's various companies use the SMS service as an alternative to traditional advertising platforms.

The nineties witnessed a revolution in the UAE telecommunications sector, as Etisalat provided Internet services for the first time in the region in 1995 and the first broadband Internet service in 1999. This laid the foundations for the future of digital services and solutions in the following years. In 2000, the UAE launched the first cable television broadcast services, and in 2002, the GPRS (General Packet Radio Service) network allowed customers

to transfer data over cellular networks, mobile Internet, multimedia messaging, and other data communications. Etisalat laid the foundation for an advanced future network in the early 2000s using high-speed downlink packet access that provides high-speed Internet services through mobile phones and mobile data cards, as part of the third generation revolution for mobile networks to provide users with high-speed downloading.⁽¹⁴⁾

During the reign of the late Sheikh Khalifa bin Zayed bin Sultan Al Nahyan, the Emirates Integrated Telecommunications Company “du” was established in 2006⁽¹⁵⁾ to accelerate the pace of development in this sector by introducing the fifth-generation network and expanding the fiber optic network infrastructure in the Emirates. The UAE was the first regionally and internationally in the process of converting land networks from copper to fiber optics so the Emirates became at the forefront of the world in terms of the percentage and rates of network penetration and its access to homes and institutions. The UAE maintained its first place globally in the fiber optic network penetration connected to homes according to the report issued by the Fiber to the Home (FTTH) World Council in 2023, and its global leadership since 2016.⁽¹⁶⁾

| Date | Event | Date | Event |
|------|--|-------------------|---|
| 1976 | Establishment of Emirates Etisalat Corporation | 2011 | The first launch of 4th generation network in the region |
| 1982 | Launch of the first mobile network in the Middle East | 2014 | The first launch of 5th generation network in the region |
| 1994 | Provision of the first GSM service in the Middle East | 2016 | Launch of Etisalat Digital for driving digital transformation in the region |
| 1995 | Introduction of the commercial internet services | 2023 2017 Present | The UAE ranked first globally in the fibre optic network 2016 and continued in the forefront for subsequent years |
| 1999 | Launch of broadband internet service in the Middle East | | |
| 2000 | Launch of service of cable TV channels (E-vision) | 2018 | The first commercial launch of G5 network in the region |
| 2003 | Launch of the first 3rd generation network in the Middle East | 2019 | The first smart mobile phones G5 in the Middle East and North Africa |
| 2006 | Establishment of Emirates Integrated Telecommunication Corporation | 2020 | The UAE is the first country in the Middle East launched 500 megahertz additional to Wi Fi networks |
| 2008 | Completion of fibre optic network in the UAE | 2021 | The UAE ranked first globally at the Wireless Broadband Index -World Digital Competitiveness Report 2017 |

The percentage of internet users in the UAE is the highest in the world compared to other countries, according to World Bank data in 2021 and 2022. The Kingdom of Saudi Arabia shares this rank with the country.

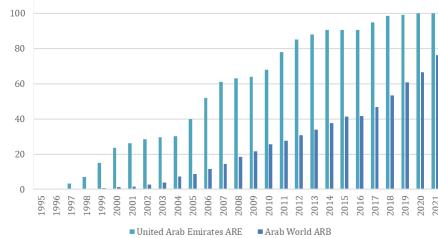


Figure 1 shows that the percentage of internet use in the UAE has witnessed an upward increase since 1995, with the percentage not exceeding 1%, to 100% in 2021. This reflects the remarkable efforts made by the government to provide and expand the Internet network to include all segments of society.

Digital Government

Digital government plays a pivotal role in achieving regulation, enhancing automation, and adapting the suitable work environment and regulations that provide the legal structures and support the development and effective management of digital activities and necessary resources of automation. The UAE developed digital transformation steps and a qualitative shift in services, methods, and channels. In 2000, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, may God protect him, announced the first-of-its-kind “e-Government” program in the region, which formed the first building block for all subsequent digital transformation initiatives at the state level. He stressed that the goal is to “consolidate the UAE leadership in the field of electronic development.”⁽²⁰⁾

The e-government program is a comprehensive philosophical management that involves making a qualitative change that aims to reconsider the concepts of government administration and services. The program is a formulation of a new reality in light of technical changes and reciprocal relations between government agencies on the one hand and the customers on the other hand, at any time and place. The concept of e-government has two dimensions: electronic readiness and electronic participation.⁽²¹⁾ The UAE leadership has provided financial, human, and administrative resources to achieve this strategic project, believing in its importance in driving future development.



Figure 2: Digital transformation in the UAE⁽²²⁾

The UAE launched the e-Dirham project⁽²³⁾ in 2001. It is its first project that automated the payment process of government services fees. The e-Dirham-collected revenues exceeded AED 22 billion in 2019.⁽²⁴⁾ Since its establishment, the UAE e-Government improved its services to meet the customers' aspirations. The UAE remarkably offers many services on the UAE official electronic portal (www.uae.ae). The portal is the UAE government's online official channel and provides access to all government services. They include individual, business, and visitor services. The portal is also a primary platform for interaction and communication with the government. To enhance inter-communication between government agencies, and to provide data and information securely, the UAE federal government information network links government departments and the government unifies the joint federal and local systems.

On May 22, 2013, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, may God protect him, launched the UAE's Smart Government initiative. It aims to provide services to the public around the clock. Smart government can be defined as the strategic use of advanced information and communications technology (ICT) and mobile technologies to deliver public services. Essentially, any smart government uses mobile technologies. Smart government often adopts the gradual use of these technologies to offer smart, interactive, context-based services and human-machine communication.⁽²⁵⁾ Three groups represent the stakeholders: the sector, service providers, and customers.

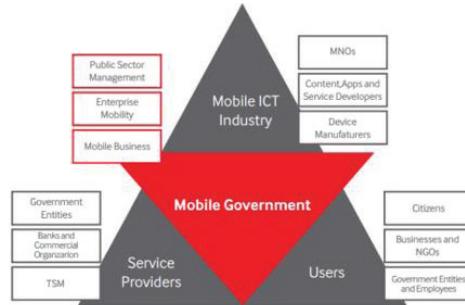


Figure 3: General environment of smart government ⁽²⁶⁾

The features of smart government are identified in the following points:⁽²⁷⁾

- | | |
|--|---|
| <ul style="list-style-type: none"> • A government that never sleeps • Works 24 hours a day, 365 days a year • As hospitable as hotels • Fast in its transactions | <ul style="list-style-type: none"> • Strong in its procedures • Responds quickly to changes • Innovates solutions to challenges • Facilitates people's lives and brings happiness |
|--|---|

The UAE smart government is an extension and development of e-government to keep pace with technical and societal developments, especially with the widespread of smart devices among all segments of society. It should be taken into consideration that it is not just a simple extension of e-government, rather it is an advanced level that seeks to improve the provision of services more effectively. The smart government-provided improvements are either developing current e-services for government agencies or adding completely new and unique smart services. The four types of general improvements to smart government are:⁽²⁸⁾

- **Direct conversion of the government portal:** This is the conversion of existing electronic services from the e-government portal to the smart government services and traditional services provided on the smart platform.
- **New smart services provided to customers:** The smart government services that cannot be provided in traditional e-government, but can be provided due to the technical development and modern smart technologies, for example, mobile devices payment in public transportation services and parking, and satellite geographic location-based services.
- **Field or mobile worker services:** The services represent the automation of fieldwork and the workforce. The field employees, such as emergency services, inspection services, and patient care employees are equipped with smart devices and technologies.

- **Flexible work:** The change in the concept of work in government agencies encourages remote work and allows employees to use smart devices and applications in the office.

The smart government applications and services vary depending on the target group. They are divided into four types: Government services provided to (1) individual customers, (2) companies, (3) government entities, and (4) employees.

The services include several stages, from identifying the needs and challenges of customers, classifying the type of service, determining its channels, automation, and reliability, developing a user guide, and measuring its effectiveness. The UAE has issued guidelines and standards for developing services. For instance, the UAE published the Government Services Development Guide 2.0, issued in 2023, which is a comprehensive reference to support the public and private sectors locally and globally to develop and provide services according to a methodology that enhances productivity.

Smart Digital Identity Card Project:

This project is an essential part of the digital government strategy in the UAE. It is a joint integrated project between the Dubai Digital Authority, the Telecommunications Regulatory Authority the Digital Government, and the Abu Dhabi Digital Authority, and it is one of the automation enablers. The UAE launched a digital identity application at GITEX Technology Week 2018. The app aims to achieve digital transformation and contribute to sustainability by eliminating paper transactions. The digital identity card allows users to access about 6,000 services offered by more than 130 federal and local government and semi-government entities smoothly and securely. In addition, it can avoid the risk of electronic fraud and identity theft. The Central Bank of the UAE has adopted the digital identity initiative allowing banks across the Emirates to use it in processing banking transactions.⁽²⁹⁾

This card has high-tech features and advanced security means. It can verify the identity of the customer, such as face ID. The digital wallet helps save and exchange digital documents with government agencies safely. It can also complete transactions quickly and without the need to submit paper documents, in addition to the digital signature that enables the customer to sign documents and transactions through the application, with immediate verification using Blockchain technology to ensure the highest levels of security and follow-up.

Government Services

The UAE federal and local entities provide services through the electronic portal, smart

platforms, and applications. In 2023, the UAE introduced about 6,000 federal and local services online including 1,913 federal digital services. The procedural services constituted about 87% of the total services provided through the portal. Many of these services require the use of the digital identity.



Figure No. 4: Statistics on services provided through the UAE e-portal (2023)⁽³⁰⁾

Examples of Automated Services

There are many examples of automated services, including:

- **The Human Resources Information Management System** “Bayanati” in the Federal Government, enables comprehensive automation of all human resources procedures in federal ministries and agencies. It includes financial aspects and employee salaries and creates a unified database covering all federal ministries and agencies. 5 million transactions have been carried out within the self-service system since its official launch in 2012 until the end of 2020.⁽³¹⁾
- **The Smart Employee Application**, which is a platform that enables Dubai government employees to access a variety of automated services from anywhere, including applying for leaves, requesting permits and approvals, reviewing procedures, printing certificates, and more.⁽³²⁾
- **The Smart Warehouse Management Application**, which provides automated services to manage the pharmaceutical inventory in the Emirate of Dubai, and avoid any shortage of pharmaceutical items. This is achieved by automating planning, purchasing, and management processes, using data collected from multiple sources.⁽³³⁾
- **Taxi request services**: These services provide an easy and convenient experience for users, enabling them to request a taxi automatically via smartphone applications that allow them to determine their geographical location and destination. The systems of these applications and services rely on navigation and geolocation technologies, and provide the customer and driver with information about the trip and electronic payment methods, in addition to allowing the customer the opportunity to evaluate experience, examples of which include the Taxi application Abu Dhabi⁽³⁴⁾, and the DTC smart application.⁽³⁵⁾
- **Airport services** such as online self-registration and smart gates, facilitate the procedures for travelers in an automated manner without the need to visit a passport officer.⁽³⁶⁾

Services Integration and Automation

Without the integration of services of government and private entities, the transfer of data and automation becomes complex, as customers or employees may be required to enter the same data repeatedly, and the process increases the possibility of human errors. However, modern technologies and development enhance the ability to transfer and share data. The customer can enter data only once, and services to be linked seamlessly. The “Mabrouk Ma Yak” service is an example of the integration of services and automation. It is an integrated automated service provided to new citizen births, through which the customer obtains many services such as issuing a birth certificate, adding the newborn to the family record, issuing a passport, issuing an ID card, using health insurance, and registering the newborn in the population registry. The services integration is cross-government mutual cooperation between the Telecommunications Regulatory Authority and the Digital Government, the Ministry of Interior, the Ministry of Health, and the Ministry of Finance, the Federal Authority for Identity and Citizenship, Customs and Ports Security, the Abu Dhabi Health Authority, Emirates Post, hospitals, and other entities.

Customer Happiness

His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, launched the Emirates Program for Distinguished Government Services in March 2011. The program aims to achieve a qualitative leap efficiently, with diverse delivery channels, and comprehensiveness. Moreover, the program ensures a comfortable experience for all customers of federal government services and facilitates procedures and transaction completion.⁽³⁷⁾ The initiatives of this program include:

- Global Star Rating System for Services**

Launched in 2011⁽³⁸⁾, this system aims to improve the quality of government and private services. The system focuses on customer-centric services and employee happiness and improves operational efficiency and high-quality services at a seven-star level. This integrated system is the first of its kind in the world. Despite its launch in the United Arab Emirates, it sets a world-class standard that helps government and private entities measure, improve, and bring about a tangible transformation in the field of service provision.⁽³⁹⁾ The system focuses on improving the customer experience through the integration of services and the consistency of procedures and happiness. The initiative emphasizes cooperation between the government and the community to develop services to improve the customer experience. In addition, it focuses on the positive work environment that supports and empowers employees of customer happiness centers.

- **Customer Pulse Survey:**

This initiative is a platform for effective communication between service providers and customers. As its name suggests, it simulates the pulse of customers and monitors their impressions and satisfaction directly and immediately during their interaction with government entities and service providers. The survey asks the customers to express comments and impressions about their experience with government transactions or services. Customer Pulse is linked to 32 federal government entities, more than 1,400 electronic services, 300 service centers, and 25 smart applications.⁽⁴⁰⁾

- **“Mystery Shopper” App**

The expansion and development of service delivery channels resulted in the transfer of services outside government agencies and institutions, which allows accessing various services faster and more effectively. The “Mystery Shopper” app meets the needs of customers and contributes to effective participation in improving the quality of government services. It allows all customers to evaluate the quality of government services, evaluate service providers, and service delivery centers, and send any comments or suggestions to the relevant officials. This application also enhances the role of the customer as an active partner in developing and improving government services. The user-friendly mystery shopper application supports 8 languages.⁽⁴¹⁾

The initiatives that aim to improve the customer’s experience with services and enhance a positive work environment, strengthen the integration between the policies and programs, by including happiness, wellbeing, and the work environment in the National Program for Happiness and Wellbeing. These efforts maintain the UAE’s first place in the Arab world for the sixth consecutive year, in the World Happiness Report 2023, issued annually by the UN Sustainable Development Solutions Network.

Development and Capacity Building

Partnerships, exhibitions, conferences, and competitions play a role in developing services and solutions in various sectors. They create a fruitful environment for exchanging knowledge, enhancing experiences, and stimulating innovation. In addition, challenges and competitions drive creative thinking, which encourages the development of new and effective solutions that meet the needs of society. The UAE-organized events to achieve these goals include.

UAE Innovation Month

The Innovation Month initiative aims to promote a culture of creativity and innovation in the Emirati community. It began in 2014 when the Cabinet approved 2015 as the Year of Innovation in the country.⁽⁴²⁾ The government directed all federal entities to intensify efforts and review government policies to create an environment that stimulates innovation and brings the UAE to the top ranks globally. The government also launched UAE Innovation Week in August 2015, under the directives of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai. The initiative is in line with the announcement of the late Sheikh Khalifa bin Zayed Al Nahyan, may his soul rest in peace, of 2015 as the Year of Innovation. The initiative provides an opportunity for the participation of the government, the private sector, and individuals to help spread the culture of creativity and enhance its position as a global center for innovation. After its success in the first two years, the initiative was transformed into the “UAE Innovation Month”,⁽⁴³⁾ under the directives of His Highness Sheikh Mohammed bin Rashid Al Maktoum. February was designated as the month of innovation, providing more opportunities for participation and enhancing interaction between the government, the private sector, and individuals in achieving progress and development.

UAE Hackathon ⁽⁴⁴⁾

The UAE Hackathon, launched by the UAE government in February 2018, is the largest national competitive innovation event of its kind at the national and regional levels. Hackathon is held in all emirates, on the sidelines of the Innovation Month activities. The hackathon includes studying available government-relevant data to identify gaps and scope for improvement in services, in addition to innovating and developing solutions and designing smart applications to provide a new level of well-being and benefit for members of society. The Telecommunications Regulatory Authority and the Digital Government organize it annually as part of their efforts to spread the culture of digital transformation, in cooperation with many government agencies and private sector companies that have supported the success of its event since its launch.

Gulf Information Technology Exhibition ⁽⁴⁵⁾

Since its launch in 1981, the UAE Gulf Information Technology Exhibition “GITEX” or GITEX Week has displayed technical and technological developments at national, regional, and international levels. The platform of communication, experiences, practices, and ideas displays innovations, forms international partnerships, and highlights the latest developments and technologies worldwide. The Telecommunications Regulatory Authority and the Digital Government manage and organize the Federal Digital Government platform at GITEX annually.

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The platform allows federal government entities to participate and exchange experiences, in cooperation with various federal government entities. The UAE local governments also actively participate in this exhibition from local platforms.

The exhibition annually witnesses the participation of a wide segment of society and from various sectors since its launch, including the participation and attendance of government officials and executives, government entities, educational institutions, academics, students, experts, and entrepreneurs, in addition to those interested in the public to learn about the latest developments and technological achievements. The number of attendees has grown since its launch from about 3,000⁽⁴⁶⁾ visitors in 1981 to nearly 170,000 visitors in 2022, and attendance from outside the country constituted 40% of the total visitors in 2022. During COVID-19, the exhibition was a platform to display many modern technologies and solutions that contributed to overcoming the crisis, such as remote displays, virtual conferences, distance-learning technologies, and others. The UAE government organized the exhibition during the pandemic in a hybrid manner.⁽⁴⁷⁾

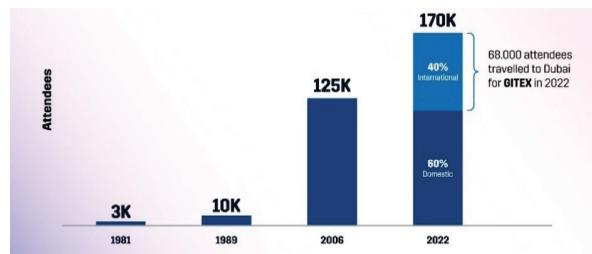


Figure 5: GITEX attendance 1981 - 2022

<https://lucidityinsights.com/infobytes/the-evolution-of-gitex-global>

World Government Summit⁽⁴⁸⁾

The World Government Summit is a global program for exchanging knowledge and expertise between governments with a focus on harnessing technology and innovation to address the challenges facing humanity and reflect the future vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Ruler of Dubai, for the role of governments.

UAE Codes⁽⁴⁹⁾

In 2021, His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, may God protect him, directed the adoption of October 29 of each year as a day for programming under the slogan "UAE Codes". The choice

of this particular date by His Highness was not a coincidence, as he wanted to establish this day in the memory of generations as an important event in the history of the Emirates. On October 29, the UAE launched the first e-government in the region. It is an incentive to participate in shaping the future of the Emirates, consolidate future values and skills among new generations, and enhance community awareness, and programming skills. The UAE submitted a proposal to the United Nations Educational, Scientific and Cultural Organization (UNESCO) to designate October 29 each year as the World Day of Programming. The UAE believes in the importance of cooperation and motivates everyone to participate in programming-related challenges and opportunities. It also supports measures that enhance programming learning opportunities and benefit society from technological developments. The 42nd UNESCO General Conference approved the UAE proposal in 2023.⁽⁵⁰⁾

Digital Government Development Indicators

The UN Department of Economic and Social Affairs issues the United Nations E-Government Survey every two years. It assesses the digital growth of governments across all 193 UN member states. The study aims to measure the effectiveness of e-governments in providing public services and highlights models of e-government performance and development. The UAE's digital transformation efforts, including automation and development of services, have contributed to raising the country's competitiveness at the global level. The 2022 study showed the UAE's progress in e-government development. The UAE recorded a qualitative leap in the overall performance of e-government development, advancing globally from 29th place in 2016 to 13th place in 2022, and moving to the Very High E-Government Development Index. It is a remarkable achievement, as the UAE has become one of the few leading countries in this field. This study highlights the UAE's ability to improve its work and to adopt the latest modern technologies to enhance the interaction of citizens and customers with e-government. The study uses the E-Government Development Index (EGDI) to assess the level of e-government development at the national level. It is a composite index based on the arithmetic average of three standard indicators: the Online Services Index (OSI), the Telecommunications Infrastructure Readiness Index (TII), and the Human Capital Index (HCI). The results of these indicators clearly show the government's great efforts in achieving progress in digital transformation with a more flexible, effective, and future-proof government.

The study also shows that the UAE not only provides advanced electronic and digital services but also continuously enhances the communications infrastructure and encourages citizen participation in decision-making, which places it among the fifteen leading countries in the world in the digital transformation of governments. In addition, it is the third country

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in Asia after the Republic of Korea, which ranks third in the world and first in Asia, and the Republic of Singapore, which ranks 12th in the world and second in Asia. The UAE is a pioneer in digital transformation at the Arab and Gulf levels and is the first country to be classified as VH in the E-Government Development Index.

Table 2: World Leaders in E-Government Development (52)

Table 1.1 Leading countries in e-government development, 2022

| Country name | Rating class | Region | OSI | HCI | TII | EGDI (2022) | EGDI (2020) |
|--|--------------|----------|--------|--------|--------|-------------|-------------|
| Denmark | VH | Europe | 0.9797 | 0.9559 | 0.9795 | 0.9717 | 0.9758 |
| Finland | VH | Europe | 0.9833 | 0.9640 | 0.9127 | 0.9533 | 0.9452 |
| Republic of Korea | VH | Asia | 0.9826 | 0.9087 | 0.9674 | 0.9529 | 0.9560 |
| New Zealand | VH | Oceania | 0.9579 | 0.9823 | 0.8896 | 0.9432 | 0.9339 |
| Sweden | VH | Europe | 0.9002 | 0.9649 | 0.9580 | 0.9410 | 0.9365 |
| Iceland | VH | Europe | 0.8867 | 0.9657 | 0.9705 | 0.9410 | 0.9101 |
| Australia | VH | Oceania | 0.9380 | 1.0000 | 0.8836 | 0.9405 | 0.9432 |
| Estonia | VH | Europe | 1.0000 | 0.9231 | 0.8949 | 0.9393 | 0.9473 |
| Netherlands | VH | Europe | 0.9026 | 0.9506 | 0.9620 | 0.9384 | 0.9228 |
| United States of America | VH | Americas | 0.9304 | 0.9276 | 0.8874 | 0.9151 | 0.9297 |
| United Kingdom of Great Britain and Northern Ireland | VH | Europe | 0.8859 | 0.9369 | 0.9186 | 0.9138 | 0.9358 |
| Singapore | VH | Asia | 0.9620 | 0.9021 | 0.8758 | 0.9133 | 0.9150 |
| United Arab Emirates | VH | Asia | 0.9014 | 0.8711 | 0.9306 | 0.9010 | 0.8555 |
| Japan | VH | Asia | 0.9094 | 0.8765 | 0.9147 | 0.9002 | 0.8989 |
| Malta | VH | Europe | 0.8849 | 0.8734 | 0.9245 | 0.8943 | 0.8547 |

Sources: 2020 and 2022 United Nations E-Government Surveys.

Table 3: E-Government Development in GCC Member States⁽⁵³⁾

Table 2.4 E-government development in the member countries of the Cooperation Council for the Arab States of the Gulf (GCC)

| Country | Rating class | EGDI rank | Subregion | OSI value | HCI value | TII value | EGDI (2022) | EGDI (2020) |
|----------------------|--------------|-----------|--------------|-----------|-----------|-----------|-------------|-------------|
| United Arab Emirates | VH | 13 | Western Asia | 0.9014 | 0.8711 | 0.9306 | 0.9010 | 0.8555 |
| Saudi Arabia | V2 | 31 | Western Asia | 0.8220 | 0.8662 | 0.8735 | 0.8539 | 0.7991 |
| Oman | V1 | 50 | Western Asia | 0.7423 | 0.8067 | 0.8012 | 0.7834 | 0.7749 |
| Bahrain | V1 | 54 | Western Asia | 0.7523 | 0.8154 | 0.7444 | 0.7707 | 0.8213 |
| Kuwait* | VH | 61 | Western Asia | 0.6973 | 0.7706 | 0.7774 | 0.7484 | 0.7913 |
| Qatar | HV | 78 | Western Asia | 0.6094 | 0.7150 | 0.8203 | 0.7149 | 0.7173 |

Sources: 2020 and 2022 United Nations E-Government Surveys.
* Countries that moved from the very high to the high EGDI group in 2022.

Technological Development

Technology and Education

The UAE is one of the leading countries in the use of technology in education, whether at the level of general, higher, vocational education, or scientific research. The educational system has demonstrated a high ability to adapt to the challenges imposed by the COVID-19 pandemic on the educational process at its various stages. The UAE smoothly transitioned from the in-person education system to the distance education system, benefiting from the strong digital infrastructure and educational technological tools.

Artificial Intelligence

Artificial intelligence has been evolving significantly since its beginnings in the 1950s when computer scientist John McCarthy first introduced the term “artificial intelligence” at a scientific conference held at Dartmouth College in 1956.⁽⁵⁴⁾ The conference attendees agreed that artificial intelligence is the creation of machines that somehow mimic the evolution of the human mind.

The definition of artificial intelligence varies to include different types, including general artificial intelligence, which aims to perform various tasks. Specialized artificial intelligence focuses on a specific field of tasks. Super-artificial intelligence includes technologies that are more intelligent than human minds. Generative artificial intelligence uses machine-learning techniques to create new data, such as images, texts, and audio clips, based on human training in these technologies. Generative artificial intelligence⁽⁵⁵⁾ can be used to create virtual assistants for electronic conversations and interactive services. It composes music and artistic content for marketing or creative purposes as well.

Artificial intelligence technologies play a vital and diverse role in our daily lives. These technologies are used to improve the experience of interacting with email, by classifying and filtering messages, providing smart suggestions for email texts, as well as in text translation applications and programs, and voice assistant applications. These applications rely on natural language processing to improve the provision of information and understand commands more accurately. The power of artificial intelligence in smart systems is evident through its ability to learn, as data is used to make smart decisions based on previous experiences, which leads to performance improvement. Recent studies indicate that many sectors in the country will benefit from artificial intelligence technologies and applications.

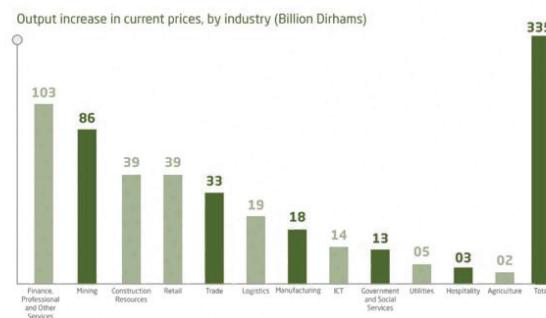


Figure 6: Estimated increase in production resulting from the application of artificial intelligence in sectors⁽⁵⁶⁾

The UAE government strengthens its position in innovation and artificial intelligence technology, by developing a strong foundation that activates, adopts, and integrates modern technologies into all its operations. The government has also focused on establishing the necessary principles to guide the effective use of data and determining social priorities to benefit from data and artificial intelligence technology. The Smart Dubai initiative and the Law Regulating the Dissemination and Exchange of Data in the Emirate of Dubai 2015,⁽⁵⁷⁾ in addition, the UAE Artificial Intelligence Strategy 2031 launched in 2017 by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai promoted such initiatives. The UAE is one of the first countries in the world to adopt artificial intelligence strategies at the national level, and this strategy is the first major project in a series of projects for the UAE Centennial 2071.

The strategy consists of five interconnected themes (governance, activation, capacity development, application, and Leadership). These themes represent integrated stages that include development, research, preparation, and gradual adoption of artificial intelligence technologies and tools in various aspects of work. This contributes to improving performance, accelerating achievement, and creating innovative work environments with high productivity, benefiting from modern artificial intelligence technologies in various fields of work. The strategy also focuses on investing energies, resources, and capabilities effectively and creatively, to accelerate the implementation of development programs and future projects. This strategy promotes harmony and clarity to achieve its goals over a specific period. The strategy also focuses primarily on supporting employees in the public and private sectors to direct energies and skills toward creative and innovative work.

- Objective 1: Establish the country's position as a destination for artificial intelligence.
- Objective 2: Increase the UAE's competitiveness in priority sectors through the development of artificial intelligence
- Objective 3: Develop a fertile ecosystem for artificial intelligence
- Objective 4: Adopt artificial intelligence in customer services to improve the standard of living and government performance
- Objective 5: Attract and train talent for future jobs that will be enabled by artificial intelligence
- Objective 6: Bring world-leading research capabilities to work in targeted sectors.
- Objective 7: Provide the necessary data and basic supporting infrastructure to become a testbed for artificial intelligence.
- Objective 8: Ensure strong governance and effective regulation.

In promoting future visions, initiatives, and the latest modern technologies to accelerate the wheel of progress and growth, the leadership established the Artificial Intelligence Office to supervise the implementation of the artificial intelligence strategy. The UAE appointed a Minister of State for Artificial Intelligence in October 2017, as the first minister in this position, making the UAE the first country in the world to adopt a ministerial structure dedicated to this advanced sector, and the first country in the world to appoint a Minister of Artificial Intelligence.⁽⁵⁸⁾

The UAE is remarkably committed to adopting AI and advanced technologies and achieving leadership in this field through implementing several initiatives at various levels. In 2023, His Highness Sheikh Khalid bin Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi, launched the AI71 artificial intelligence company affiliated with the Advanced Technology Research Council, which focuses on providing advanced AI solutions to enhance data security and privacy for global companies and institutions based on the Technology Innovation Institute-developed “Falcon” AI models.

With the increasing use of AI algorithms and technologies in decision-making, data analysis, and predictions, there is growing concern about the possibility of biased decisions that may negatively affect individuals or society as a whole. Therefore, the UAE launched the AI Ethics Guide to ensure that the technology promotes the UAE’s values and principles of the UAE.

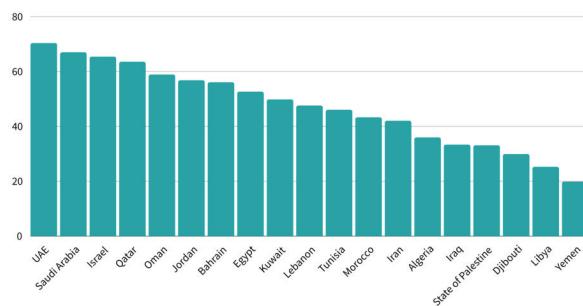


Figure 7: Government AI Readiness in the Middle East and North Africa
Government AI Readiness Index 2023

The UAE ranked first in the Middle East and North Africa region and 18th globally in the “Government AI Readiness Index 2023” report⁽⁵⁹⁾, which is a public policy consulting firm that ranks the world’s governments based on their readiness to implement AI technology in providing public services. The 2023 Government AI Readiness Index, used to rank 193⁽⁶⁰⁾

countries, measures three main pillars: government, technology sector, data, and infrastructure, with 39 sub-indicators across 10 dimensions.

| Pillars | Government | Technology Sector | Data and Infrastructure |
|------------|---|--|--|
| Dimensions | Vision AI Governance and Ethics Digital Capacity Ability to Adaptation | Ability to innovation Human capital Technical maturity | Data availability Infrastructure Data representation |

Fintech

The UAE has been a pioneer in adopting financial technology since its emergence in the region in 2017,⁽⁶¹⁾ recognizing its importance in achieving digital financial inclusion, which enhances financial stability, economic growth, and competition between financial institutions.⁽⁶²⁾ Fintech has contributed significantly to the development of the financial sector in the UAE, with the value of the local fintech market reaching a record \$2.5 billion by 2022.⁽⁶³⁾

In 2020, the Central Bank launched the Fintech Office to support fintech activities in the banking sector a fintech ecosystem in the UAE, and the UAE's fintech strategy, which focuses on innovation and collaboration.

The UAE currently leads the fintech market in the Middle East and North Africa region, with more than 50% of fintech companies in the Middle East, making it the largest fintech hub for startups in the region. A number of regulatory sandboxes and fintech accelerators have also been launched to enhance the financial technology infrastructure system.⁽⁶⁴⁾

Technological development in the space sector

The space sector significantly affects many other sectors. The technologies of this sector contribute to monitoring climate and weather, access to health care and education, water management, efficiency in transportation and agriculture, peacekeeping, and security.⁽⁶⁵⁾ It facilitates daily activities, such as communications, broadcasting, navigation, and geographic positioning systems due to satellite data. The United Arab Emirates realized the importance of developing and building a national space sector in the seventies of the last century when the late Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace, met with the NASA team responsible for the Apollo 15 mission to the moon, as this meeting was the beginning of the dream.



Figure 8: The late Sheikh Zayed bin Sultan Al Nahyan, may God rest his soul, with three astronauts as they present a miniature model of the Apollo spacecraft, in the presence of astronaut Dr. Farouk Al-Baz, at Al Buteen Palace in Abu Dhabi, February 12, 1976.⁽⁶⁶⁾

At that stage, the efforts of the late Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace, focused on building the state, the people, and the system that would lead the wheel of growth and development. There were no efforts focused on this sector. After a quarter of a century, the features of this sector began to emerge through the establishment of Thuraya Telecommunications Company in April 1997, which was a pioneering step that worked to establish a strong technical base and infrastructure for satellite communications in the country. Since its establishment, the company has provided innovative communications solutions to various sectors, including the energy sector, the government sector, media broadcasting, the maritime, military, and space sectors, and humanitarian non-governmental organizations, and to expand its activities outside the country, where it provides services via satellite in more than 150 countries.⁽⁶⁷⁾



Figure 9: Development of activities in the old and new space sector⁽⁶⁸⁾

In 2006, the Government of Dubai established the Emirates Institution for Advanced Science and Technology (EIAST) to support the space, and advanced technologies sector, and promote space research. The institution continued its contributions until April 2015, when the Mohammed bin Rashid Space Center ⁽⁶⁹⁾ was established by a decision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, may God protect him. The government merged the Emirates Institution for Advanced Science and Technology with the Mohammed bin Rashid Space Center to support the UAE's directions in the space sector. Through conducting scientific research and exploration, developing space technology projects, promoting innovation, and the effective use of space science technologies. It also focuses on global scientific competition and enhances the country's position as a leading global center in space science and technology stimulating sustainable development and contributing to the UAE's developmental and vital sectors.

A decade after the establishment of Thuraya Telecommunications Company and its success and excellence in this field, the UAE established Yahsat Satellite Communications Company, which also provides various space communications services in more than 150 countries. The company has 5 satellites covering 80% of the world's population. In 2020, it began establishing a new generation of space communications solutions satellites, which are expected to start service by the first half of 2025. ⁽⁷⁰⁾

In 2014, the leadership decided that the development and growth of this vital sector in the next phase must be based on solid organizational and scientific foundations that keep pace with the changes on the global scene. In addition, it provides capabilities and human resources, enhances the competitiveness of space industries in the UAE, and builds a strong and sustainable national space sector for the future. The Federal Decree-Law No. 1 of 2014 established the UAE Space Agency. The space sector includes all outer space-related activities, projects, and programs.

The UAE announced that a project has begun to send the first Arab and Islamic probe to Mars, called the "Hope Probe", making the United Arab Emirates one of only nine countries aspiring to explore this planet. The idea of this project emerged in late 2013 ⁽⁷¹⁾ by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai. The UAE launched the Hope Probe from Japan to the Red Planet on July 20, 2020, and it entered its orbit on February 9, 2022. The United Arab Emirates became the first Arab and Islamic country to reach Mars, achieving historic progress for the Emirates and

the Arab and Islamic worlds. The success of this pioneering scientific journey is a conclusive confirmation that the country has entered the global race to explore outer space and fathom its depths.



Figure 10: His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, accompanied by His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of the Mohammed bin Rashid Space Centre, attends and witnesses the installation of the final piece of the Hope Probe

Technology in the healthcare sector

In light of rapid technological progress and development, the healthcare sector is witnessing a real revolution locally and globally. As a result of the use of modern technologies such as artificial intelligence, surgical robots, and 3D printing, which improve the diagnosis and treatment of diseases, and enhance the effectiveness of healthcare. Surgical robotics technology is an effective tool for performing the most complex surgeries. The technology reduces surgical times, limits complications, improves medical outcomes and enhances the patient experience.⁽⁷²⁾ Artificial intelligence technologies are also beneficial for early detection of breast cancer, heart rate monitoring, predicting diseases, hospital admission, the absence of the patient, and others.

The health sector has proven highly effective during the COVID-19 pandemic, and technology has played an important role in protecting society by launching the “Al Hosn App”. This application cooperates in an integrated manner with other digital applications, such as the “Seha” application, provided by the state before the spread of the COVID-19 virus. The Al Hosn app depends on Bluetooth technology to exchange identity data, which is stored on the user’s phone app, which enables health authorities to identify infected patients and contacts.⁽⁷³⁾

Technical development has facilitated access to various health services. Citizens and residents can now obtain digital medical consultations through the telemedicine service, which allows them to communicate with physicians and health specialists via the UAE official health authorities-provided smart apps and digital platforms, such as the “Doctor for Every Citizen” service and the “Telehealth Care” platform. These services save time, effort, and costs, improve health experience and access to medical services and consultations, reduce congestion in health facilities, limit the spread of infectious diseases, and promote public health. Telehealth services increased by 500% between 2014 and 2020. The services focus on awareness, prevention, diagnosis, consultations, patient follow-up, drug prescription services, customer happiness, rehabilitation, and individual capabilities.⁽⁷⁴⁾

The UAE Ministry of Health won first place in the International Healthcare Information and Management Systems Organization “HIMSS-Elsevier Digital Healthcare Award Middle East 2020” in the categories of innovation and achievements in healthcare in the field of information technology and digital health for the early latest global electronic technologies-based hearing screening project for newborns. In addition, it includes the smart electronic unit in the electronic health “Wareed” in the innovation category and the electronic stroke unit project. It aims to unify clinical practices for stroke patients and improve IT-based performance according to international standards, which reduces the time to receive treatment and the rate of morbidity and mortality in the category of achievements in healthcare.⁽⁷⁵⁾

Cybersecurity in Technological Development

Currently, the UAE is one of the most technologically and digitally advanced countries in the world, with the digital economy contributing 9.4% to the GDP in 2022, and growth in this sector. The country has devoted significant efforts to enhancing digital capabilities, by improving the infrastructure of information and communications technology and encouraging the use of modern technologies, smartphones, and electronic payment systems. In conjunction with the UAE’s efforts to develop various fields and the growing reliance on modern digital technologies and systems, government, private, and vital institutions that adopt these technologies have faced increasing challenges. They must deal with threats to the protection of information and digital systems, including electronic piracy, electronic espionage, and information theft or hacking of systems with the intent to disrupt services, and cybercrime groups that may pose a threat to national security, information security assets and infrastructure, and others.

The UAE is a leading country in the field of cybersecurity globally, ranked among the top five countries in the world in the Cybersecurity Index issued by the International

Telecommunication Union of the United Nations.⁽⁷⁶⁾ This index has five main criteria, including legal aspects, technology, and regulatory measures, in addition to developing human capabilities and cooperation. The country's ranking is a reflection of the unlimited support and empowerment, an extension of the efforts of the leadership in the process of strengthening the cybersecurity system, and a reflection of the advanced levels of awareness of its importance in society and the need to adopt all advanced methods in protecting the infrastructure. Among these efforts, the National Cybersecurity Strategy,⁽⁷⁷⁾ aims to create a safe cyber environment, support cybersecurity standards through various mechanisms and themes, and stimulate the creation of local companies in the sector. The UAE developed the National Cybersecurity Strategy based on an analysis of more than 50 sources of global indicators and publications, working with a team of international experts, and conducting a benchmarking comparison with 10 leading countries in the field of cybersecurity systems. The strategy includes an integrated system for cybersecurity in the UAE.

The government has established a Cybersecurity Council to develop, update, and enhance a national strategy for cybersecurity in all sectors. The Council is responsible for proposing and preparing policies for this purpose. It also undertakes the development of an integrated national plan to respond to cyber threats and coordinates the exchange of information between relevant local and international entities.

The UAE has a rich track record of achievements in the field of cybersecurity in line with the determinants of the “We the Emirates” Vision 2031 to make the UAE a global center for cybersecurity. The UAE issued Federal Law No. 34 of 2021 regarding combating rumors and cybercrimes,⁽⁷⁸⁾ which aims to provide a comprehensive legal framework to enhance the protection of society from cybercrimes committed through Internet networks and technologies. It also seeks to protect websites and databases, combat the spread of rumors and fake news, electronic fraud, and preserve privacy and personal rights.

The UAE has also created a multi-layered security environment to protect the federal electronic network. It makes communication and data exchange between all local and federal entities at a high level of security. In addition, the UAE has launched initiatives in electronic safety such as the “Cyber Pulse” to raise awareness among members of society about the importance of cybersecurity and promote a culture of digital security. The initiatives include many events and activities such as training courses, workshops, and lectures in the field of cybersecurity. The UAE also established the National Computer Emergency Response Center

(aeCERT) channels, which enhance information security standards and practices, protect the infrastructure of the communications and information technology sector, and build national expertise in the field of information security and emergency management.

Conclusion

The leadership constantly seeks to adopt modern technologies, harness knowledge to develop methods of providing services, improve the quality of life, and enhance economic growth through the continuous development of the information and communications technology infrastructure, enhancing education and scientific research, encouraging innovation, and updating policies and systems to keep pace with modernity. The Corona pandemic repercussions have revealed the importance of strategic planning and investment in infrastructure and technology, especially digital and artificial intelligence to enhance sustainability and build a system capable of adapting to crises and pandemics.

Creativity and innovation, under the support and care of the leadership, continue to contribute to enhancing, developing, and using modern technologies to achieve the goals of sustainable development and the well-being of society.

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Conclusion

The United Arab Emirates University aspires to make Contemporary Emirati Studies a starting point for more horizons of scientific research that know no boundaries in a country whose path is victorious and renewed, whose renaissance is diverse and expansive, full of great and eloquent sustainable achievements.

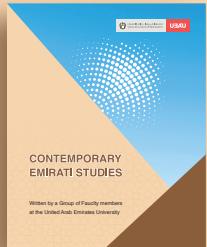
The eleven chapters with titles that express the importance of their topics, implications, and dimensions, present in detail scientific material based on induction and deriving judgments in its light, to form a cognitive framework for a course of study whose goals are to contribute to strengthening the intellectual construction of university students with its future foundations.

Each researcher gives his/her share in making this book, a vision, a message, and a goal, expressing the themes of the content and details. Each chapter has its advantages in information, analysis, and conclusion. The common denominator between them is a comprehensive painting that expresses the book title.

The Federal State and National Identity. The UAE's position in international politics, basic values and legacies, and the priorities of the UAE leadership: developing the human beings and future aspirations. It is also inconceivable that there will be real development without the active participation of women, and therefore they have a high position in the UAE. It is empowerment in all its meanings, linguistically and technically, and its renaissance is a unique experience. Emirati literature has its roots, and it is the link between language, culture, and identity. It is at the top of the list of intangible heritage. The Emirates is an Arab and global cultural hub, it occupies a distinguished position. It is a center for literature and creativity and a destination for writers and intellectuals. In light of its strategic current and future plans, the UAE is food secure. Community health services are at the forefront of the UAE leadership's priorities, and development. The UAE continues to lead regionally and globally. Therefore, the UAE's wellbeing has its programs and initiatives and is a visionary approach to achieving the wellbeing and happiness of its citizens and residents, since its establishment in 1971, to make the UAE one of the best and happiest countries in the world. The National Strategy for Wellbeing 2031 indicates the goals and areas in this regard, as well as achieving the goals of the UAE Centennial 2071.

On the other hand, the UAE gives environmental sustainability in all its details and terms great attention to achieve the goals set by its vision and strategic plans, and it adopts comprehensive and effective sustainability programs. The leadership constantly seeks to adopt

modern technologies, strategic planning, and investment in infrastructure and technology. In particular, it has adopted digital and artificial intelligence to enhance sustainability and achieve its goals within the framework of automated services and technical development, and strategies that define the features of the progress towards the future in commitment to the UAE Vision 2071.



The United Arab Emirates University aspires to make Contemporary Emirati Studies a starting point for more horizons of scientific research that know no boundaries in a country whose path is victorious and renewed, whose renaissance is diverse and expansive, full of great and eloquent sustainable achievements.

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