

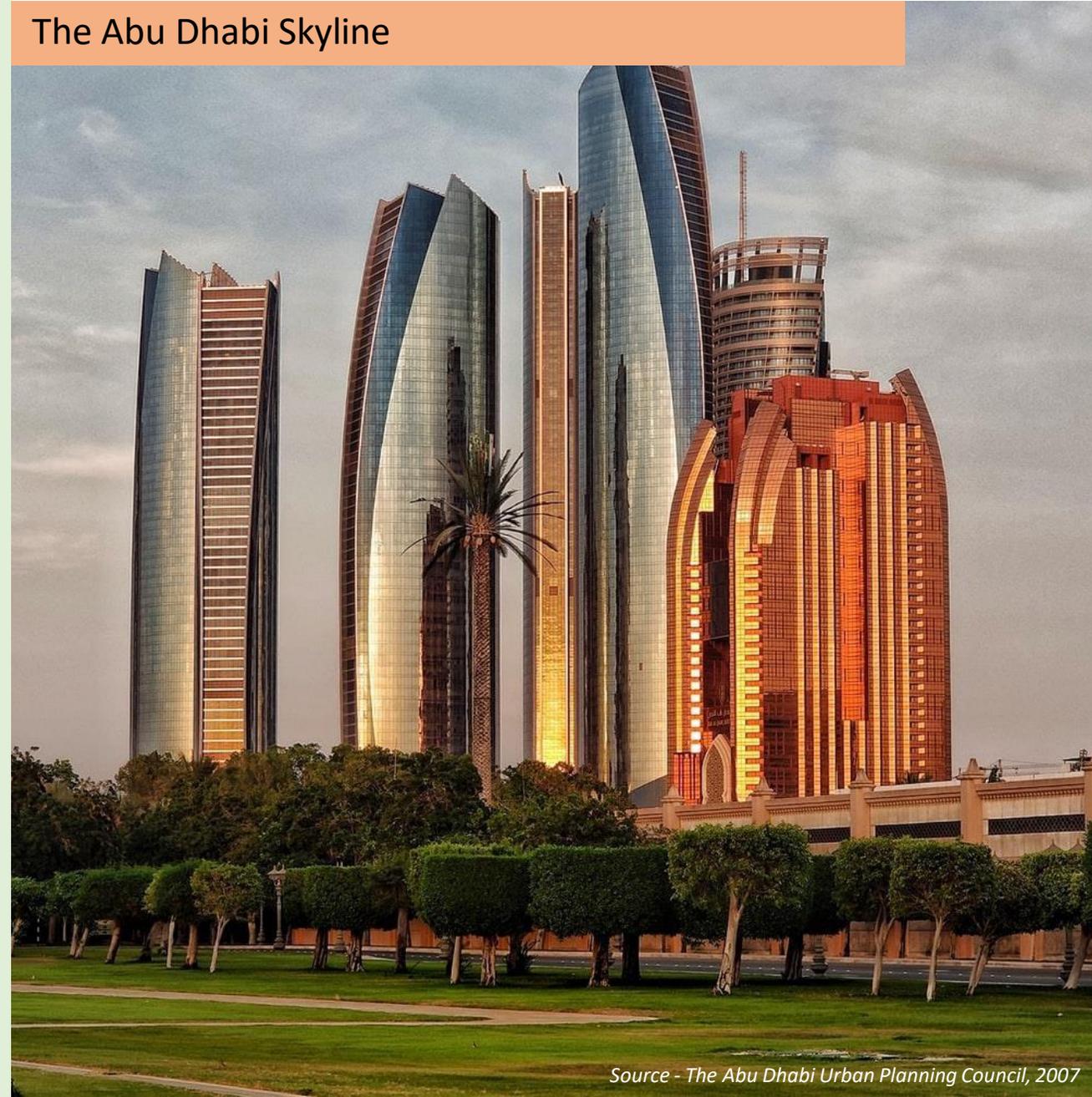


**PRESENTATION ON
ABU DABI**

ABU DHABI

The Abu Dhabi Skyline

- Abu Dhabi City is a capital with a grand vision for the future. It arose from a forgotten fishing village located in the harsh desert and coastal environments of the Arabian Peninsula to develop as a thriving urban centre in the twenty-first century.
- Urban planning and development have always played a key role in the economic and social development of Abu Dhabi City
- 90 per cent of the groundwater in the Emirate of Abu Dhabi is saline and unsuitable for drinking or for supporting any viable agriculture. In addition, the arid desert climate is characterized by temperatures that reach 48 degrees Celsius in the summer, and little rainfall during the short winters.
- Accordingly, although Abu Dhabi's desert and coastal are characterized by a rich level of biodiversity, 93 % of its landmass is inhospitable to human habitation.
- Despite all the difficulties, the population of Abu Dhabi Emirate grew exponentially from less than 20,000 people in 1960 to over 2,450,000 in 2013. Abu Dhabi City currently has a population of about 1,498,000, which amounts to nearly 61 per cent of the emirate's total population.



ABU DHABI

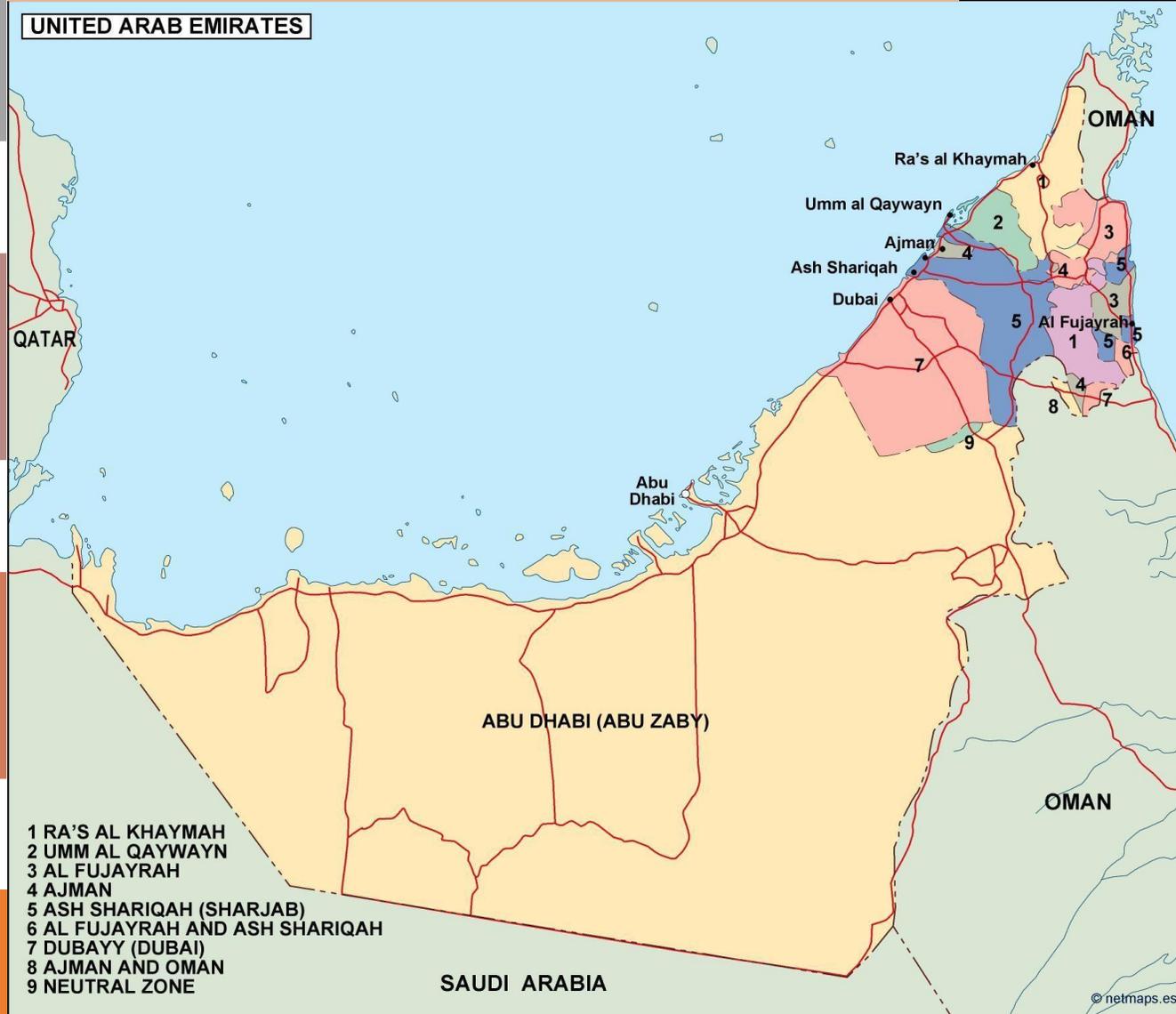
Abu Dhabi Emirate is one of the seven emirates forming the United Arab Emirates (UAE), and Abu Dhabi City is the nation's capital.

The emirate is located in the southeastern portion of the Arabian Peninsula and shares a border with the Sultanate of Oman, the emirates of Dubai and Sharjah, and Saudi Arabia.

The emirate is divided into three administrative regions. The first is the Capital Region, which includes Abu Dhabi Island, smaller adjacent islands, and the landmass that extends to the borders of Dubai and is known as the Abu Dhabi mainland.

The second is the Eastern Region, with al-'Ain City as its main centre. It is located near the edge of the Hajar Mountain range and is known for its oases and its limited agricultural activity. The third is the Western Region, which is defined by the expansive and resource-rich desert and shoreline.

UAE Political Map



Source - <https://www.netmaps.net/digital-maps/ united-arab-emirates-political-map/>

The Evolution of Abu Dhabi City's Urbanization and the Sustainability Challenge KAIS SAMARRAI

THE 1990–2010 ABU DHABI COMPREHENSIVE MASTER PLAN

- Between 1989 and 1991, the Abu Dhabi Government commenced preparations for a comprehensive development master plan for the emirate. It was the first long-term regional plan for the emirate and was led by the Abu Dhabi City Town Planning Department and the UNDP and the firm Atkins as consultants.
- The plan provided an extensive detailed analysis of environmental and socioeconomic conditions in the emirate.
- It also offered an in-depth analysis of housing and of the real estate market and stressed the need to reform the real estate sector
- Its final document provided “Master Directive Plans” for Abu Dhabi City and all adjacent settlements, including those in the Western Region, covering the emirate’s urbanization framework and land use along with an execution plan.
- At the policy level, the plan recommended a number of reforms that included the following:
 - Create a national “Five Year Plan” for economic and social development.
 - Address the different housing preferences of nationals and expatriate populations, and provide them with the needed community facilities.
 - Allow the land to be sold, and reform existing land allocation practices that took place at higher levels of government
 - Review plot sizes in the central area and allow the merging of small plots to meet the need for larger ones and to accommodate more functional layouts.
 - Prepare local plans and improve urban design practices and design quality as well as building quality and maintenance.
 - Update existing rigid building regulations to allow for more flexibility to accommodate future needs for different land uses.



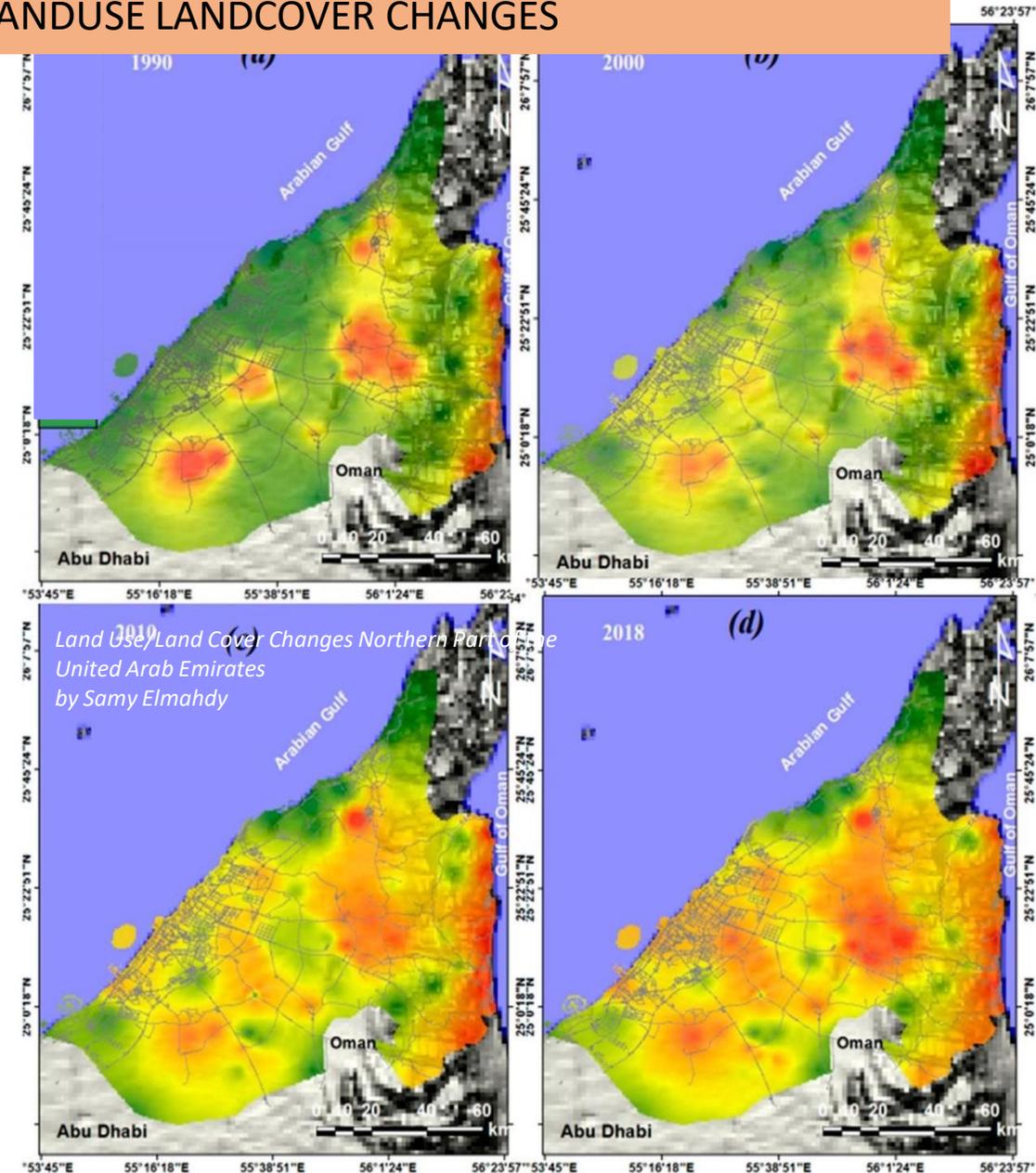
FIG. 9: The 1990–2010 Comprehensive Master Plan for Abu Dhabi, prepared by the Abu Dhabi City Town Planning Department and the United Nations Development Programme (UNDP), with the international engineering firm Atkins as consultants, 1990.

Source - The Abu Dhabi Urban Planning Council, 2007

1990–2010 COMPREHENSIVE MASTER PLAN – CRITICAL ANALYSIS

LANDUSE LANDCOVER CHANGES

- A decade after the adoption of the plan, many of its important components still were not followed or implemented. For instance, large residential developments spread south of Abu Dhabi Airport, beyond the limit of growth set by the master plan, and the al-Mussafah area remained an industrial one and was not developed into a residential area as planned.
- Also, the plan specified that the site of al-Bateen Airport near the southeastern end of Abu Dhabi Island would become the district for the federal government and for ministries, but this was abandoned. Multimodal public transport plans were not pursued, the bridge that was to link Abu Dhabi City to al-Saadiyat Island was later constructed in a different location, and only one of the three connections to al-Hodariyat
- Island was executed, as the island itself remained undeveloped. The plan also recommended a number of important projects to be considered Abu Dhabi as a capital city, but none of them were pursued. These include a national museum, a national public library, and a landmark public square.



HISTORY AND EVOLUTION



- In 1761, fresh water was discovered in Abu Dhabi (named "Maleeh" at the time, derived from salt, in reference to the salinised land that extends along the coastline of the island. The new name came from the fact that Abu Dhabi "Father of the Gazelle"

1700s

- In 1905, Sheikh Khalifa Bin Zayed launched, in an attempt to establish a unified state, an invite for a union; this tribal meeting represents the roots from which stems the political union experience in the UAE now.



1900-1950



- The city's development increased following the discovery of sizable commercial oil fields in 1958, and the expansion of the city began to accommodate the population growth of Abu Dhabi.

1960



1990

- In the 1990s, the emirate of Abu Dhabi was diligent to achieve sustainable development and recorded consecutive successes in the economic, administrative and political levels alike.. In 1996, the Supreme Council approved a modified version of the country's temporary constitution, which became the permanent constitution of the United Arab Emirates; and Abu Dhabi was selected the capital of the Union

2000



- After the demise of Zayed Bin Sultan Al Nahyan's, his son, launched the political participation program in 2005 in line with the parliamentary expansions in the UAE

2010-2021

- Abu Dhabi is currently on a concrete path paying significant attention to the principles of sustainable development to ensure continued prosperity for future generations.



SETTLEMENT HISTORY AND EVOLUTION

THE PRE-OIL SETTLEMENT OF ABU DHABI ISLAND

- Settlement in Abu Dhabi City dates back to 1871 when the tribes of the Bani Yas alliance decided to move from the Liwa desert oasis in the Western Region and settle in Abu Dhabi Island, which offered fresh groundwater and natural protection from the attacks of Al Saud from central Arabia who waged campaigns to control the Arabian Peninsula between 1765 and 1891.

The development phase 1960s

- In 1939, Sheikh Shakhbout bin Sultan Al Nahyan, the Ruler of Abu Dhabi, granted British Petroleum the first oil concessions in Abu Dhabi, but it was not until nineteen years later that they found commercially viable oil reserves, and oil exports did not start until 1962. The year 1961 marked the establishment of the Abu Dhabi Municipality, which was concerned with delivering key services such as drinking water and public health facilities. In addition to serving the immediate requirements of the town's four thousand residents, there also was a need to accommodate the growing working population that came about as a result of the presence of oil companies.
- Except for a lone desalination plant providing Abu Dhabi City with fresh water instead of the usual salty supply, no planned services were delivered.

THE POST-OIL ERA (1962–2004)

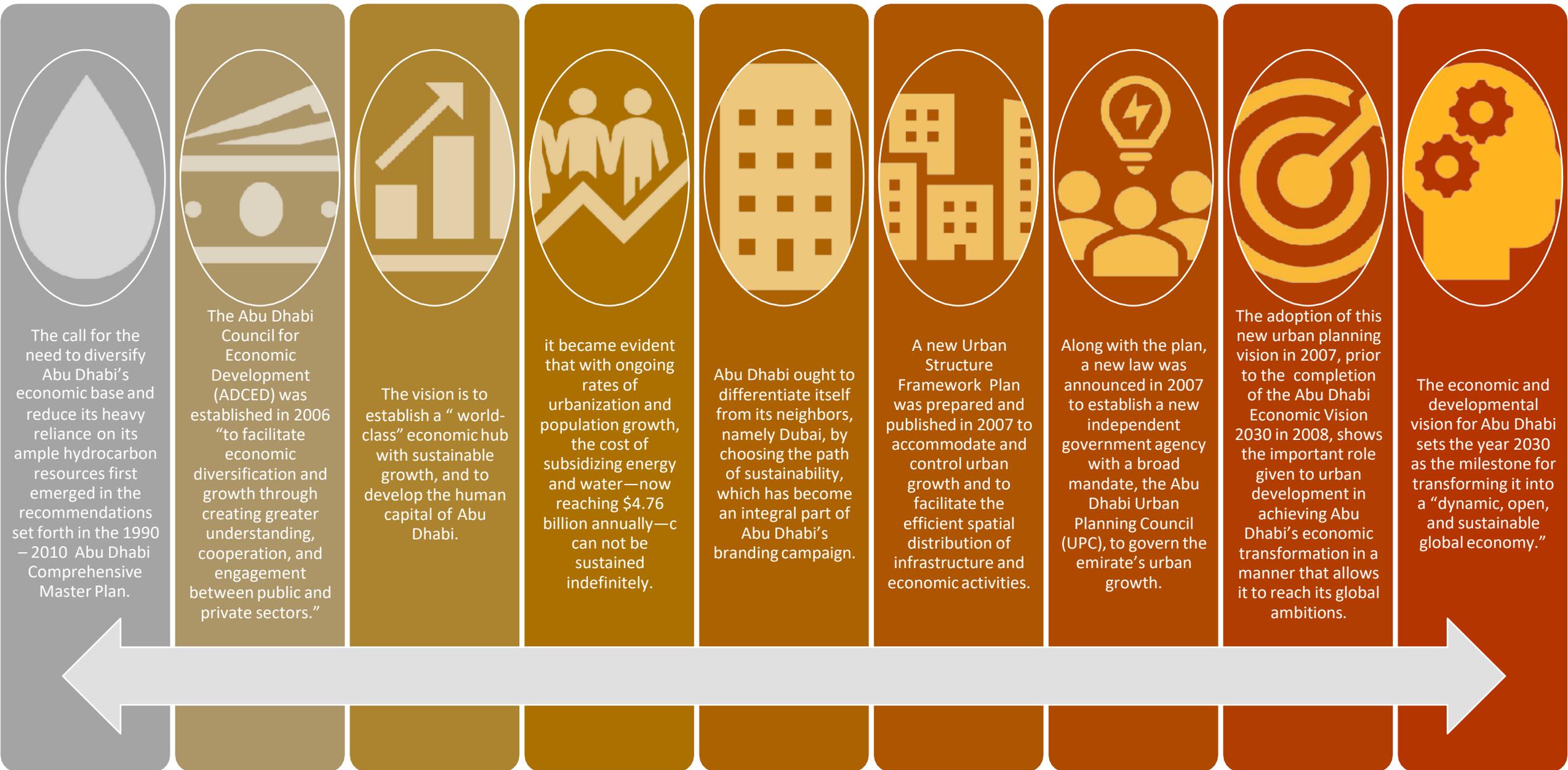
- In 1968 The new plan adopted a gridiron street pattern and proposed large blocks and wide roads with large roundabouts at intersections. Qasr al-Husn was kept, along with the location of old mosques, but the old settlement was removed and replaced by commercial and business districts, and owners were compensated with commercial, residential, and industrial plots. In 1967, the young **Japanese architect** and planner Katsuhiko Takahashi was appointed as chief town planner for Abu Dhabi Municipality. He expanded the Arabicon plans and delivered detailed designs for the plan's administrative and commercial buildings

THE GENESIS OF ABU DHABI'S URBAN FORM

- The earlier plans for Abu Dhabi City embraced the dominant planning doctrines of the modern automobile-oriented cities of the nineteen-sixties. The commercial sectors of Abu Dhabi Island were planned with wide roads and boulevards, large rectangular super blocks with lengths of one kilometer in some instances, medians with lush trees, grand roundabouts, and sizeable public parks. The lower half of the island was dedicated to low-density single-family residential dwellings
- Over two hundred apartment blocks were constructed every year during the 1980s and 1990s. The committee influenced the design of the buildings to control costs. This brought about functional but bland results. Quantity often trumped quality



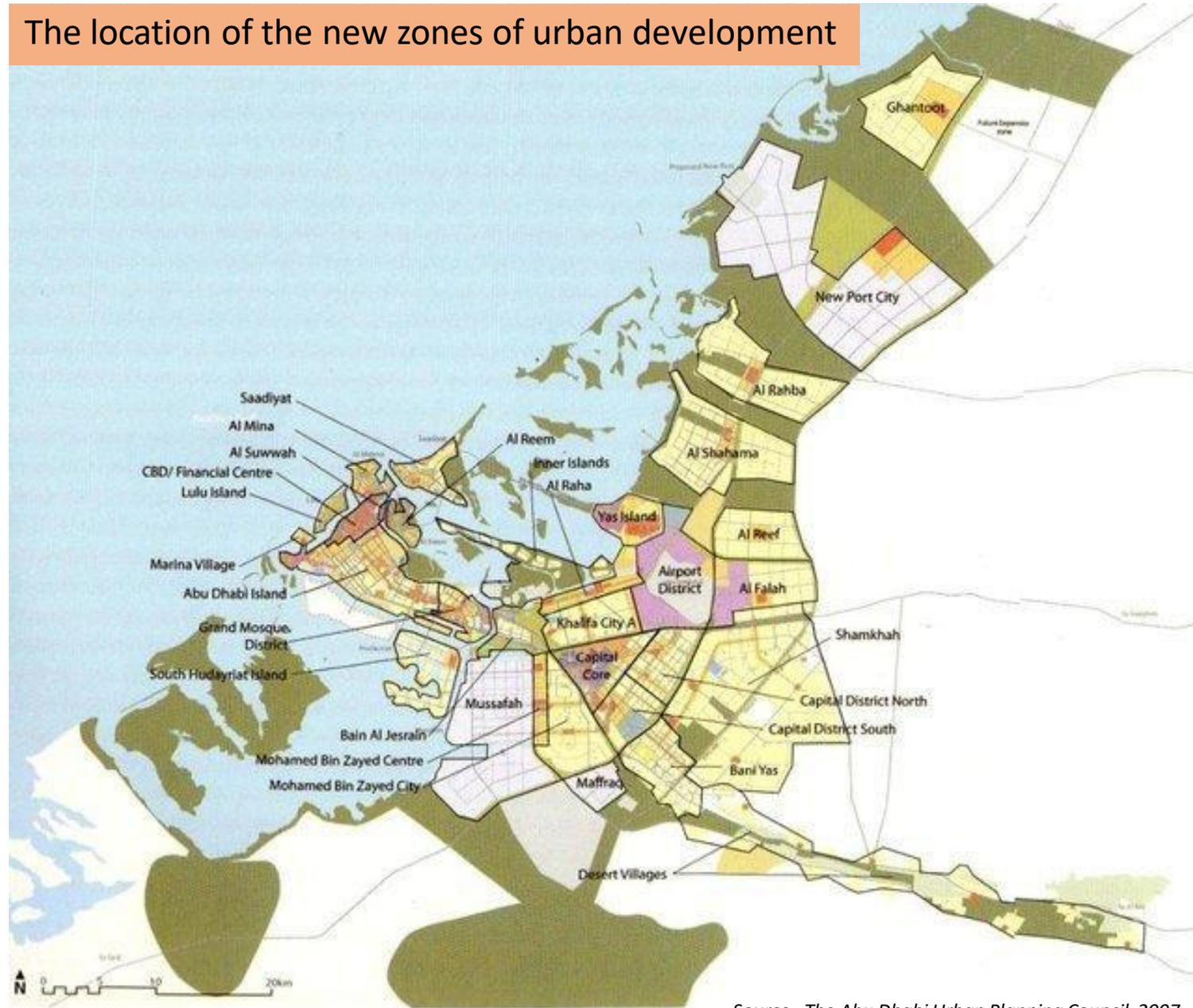
POLICY SHIFT



PLAN ABU DHABI 2030

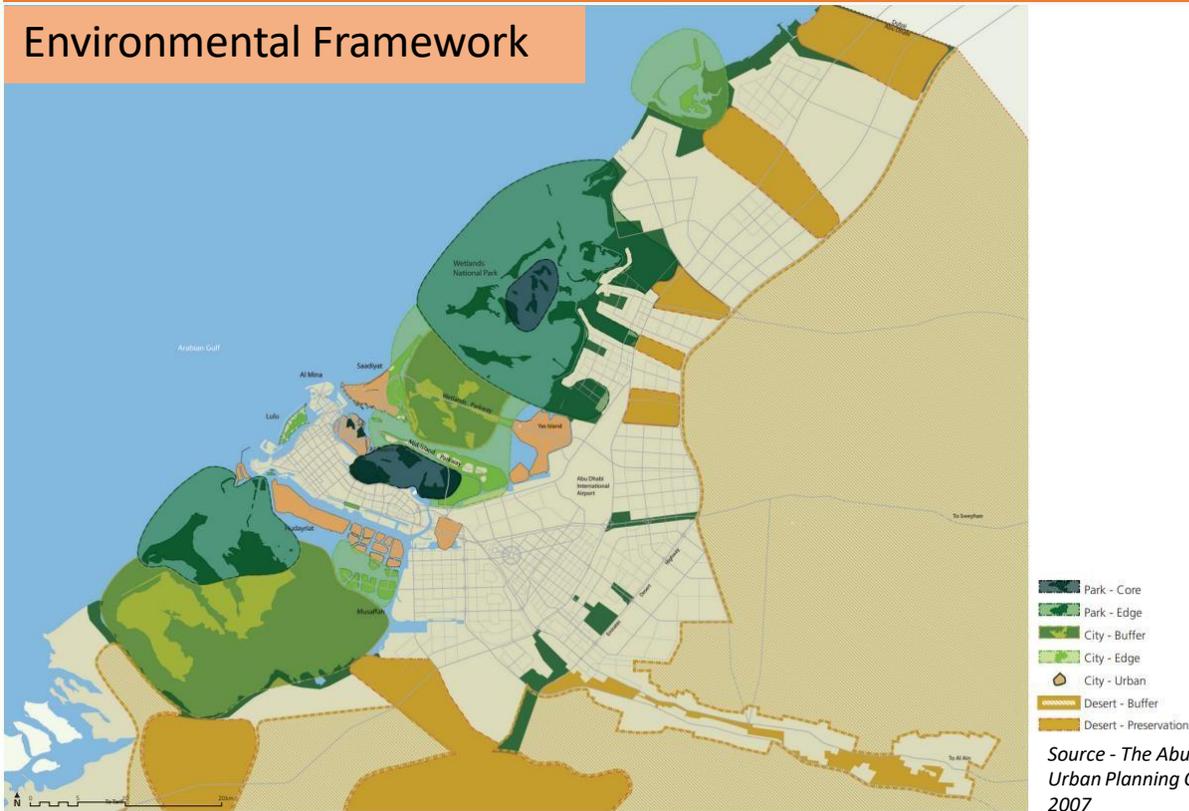
- The “Plan Abu Dhabi 2030” is an ambitious plan for an **ecologically extreme fragile region**, carried out by the Abu Dhabi Urban Planning Council (UPC).
- It carefully balances between facing **globalization**, on the one hand, and **local/ethnic identities** on the other by **focusing on physical development and environmental concerns**.
- This Framework Plan **includes the Eastern and the Western regions and focused on the Capital City region**.
- The Urban Structure Framework Plan 2030 includes a number of high-level studies, surveys, and reviews were conducted to assess existing plans and policies related to infrastructure, environment, transportation, cultural values, and worker housing, as well as evaluating some of the major aforementioned proposed developments.
- The key principals are laid down in **four frameworks** of the Plan Abu Dhabi 2030:-
 1. Environmental Framework
 2. Land Use Framework
 3. Transportation Framework
 4. Open Space Framework

The location of the new zones of urban development



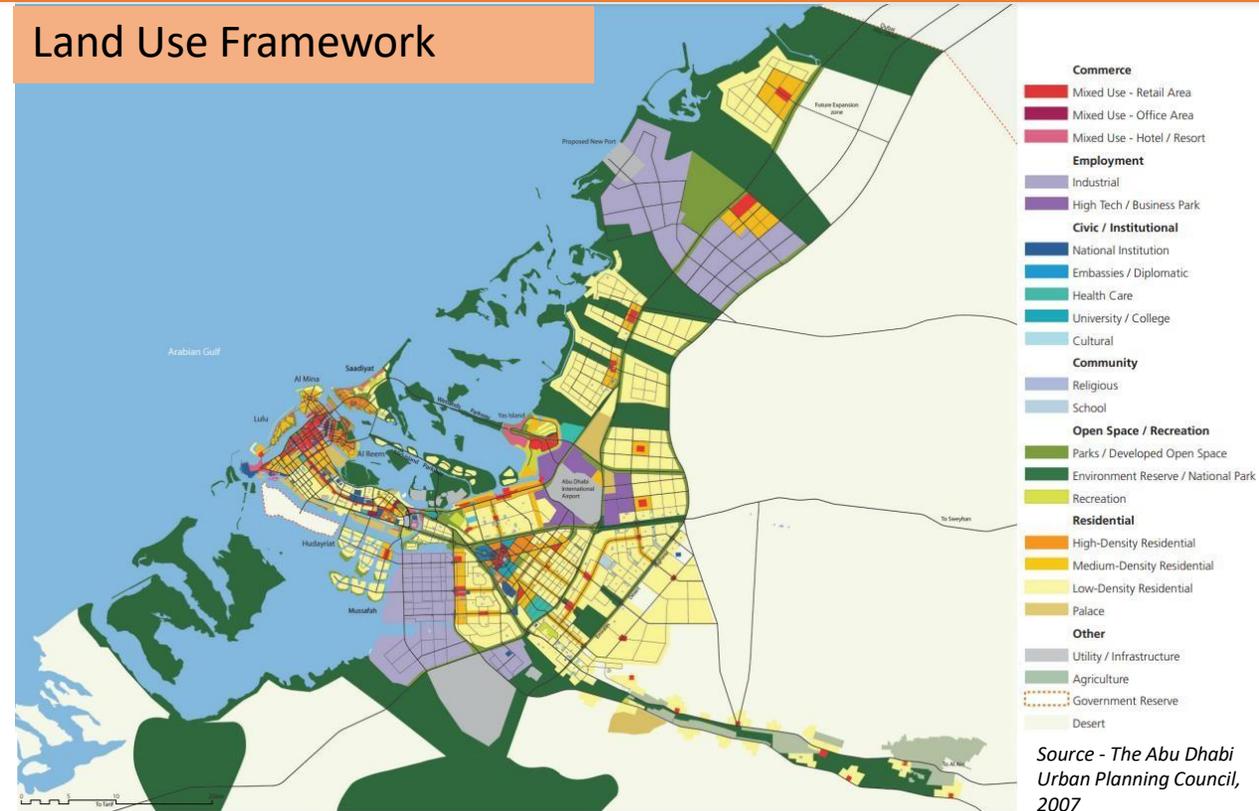
PLAN ABU DHABI 2030: THE URBAN STRUCTURE FRAMEWORK PLAN

Environmental Framework



- Many factors combine to give Abu Dhabi one of the most distinctive ecological contexts in the world.
- 1. Establishment of a **National Park (core)** system adjacent the city that takes in both terrestrial and marine environments.
- 2. **Park Edge Islands** permit a greater range of activities and structures.
- 3. **Sand Belt (City edge)** ringing the city through the desert, defining the outer limit of growth.
- 4. The **Desert Fingers / preservation** provide undeveloped buffers between the city, each coastal town, and Dubai, giving wildlife corridors to the protected coastal areas.

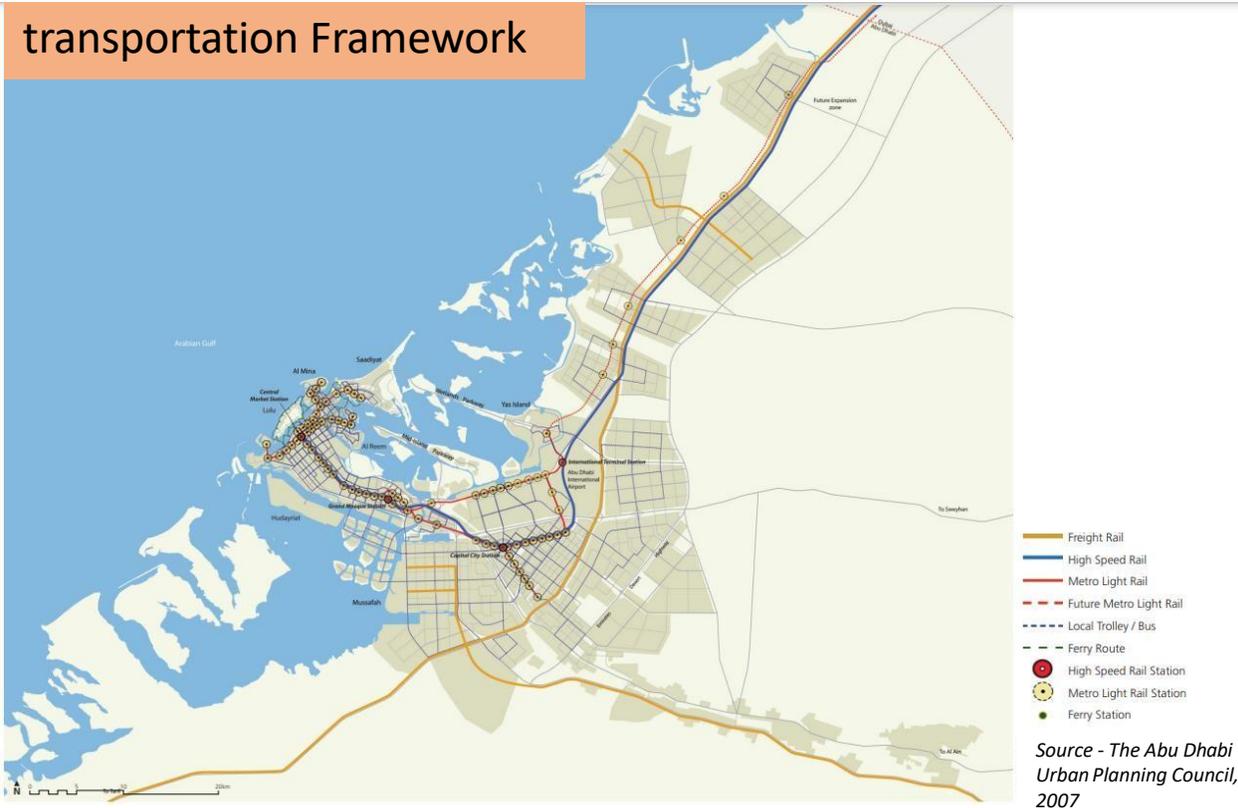
Land Use Framework



- The Land Use Framework Plan addresses the critical issues facing Abu Dhabi through several strategic moves.
- 1. Complementary **cores** are balancing the bulk of jobs between two employment centers will help to disperse traffic.
- 2. Emirati **neighborhoods** have been strategically located around all higher-density commercial nodes.
- 3. South Hudariyat Island will be significantly expanded to the south and cut through by canals, with a transition to mangroves along its **outer edge**.
- 4. Heavy **industries** surround the new port in close proximity to the in-bound materials that fuel them. High tech industries surround the airport. Smaller service-based industries are allocated to integral part of every neighborhood.

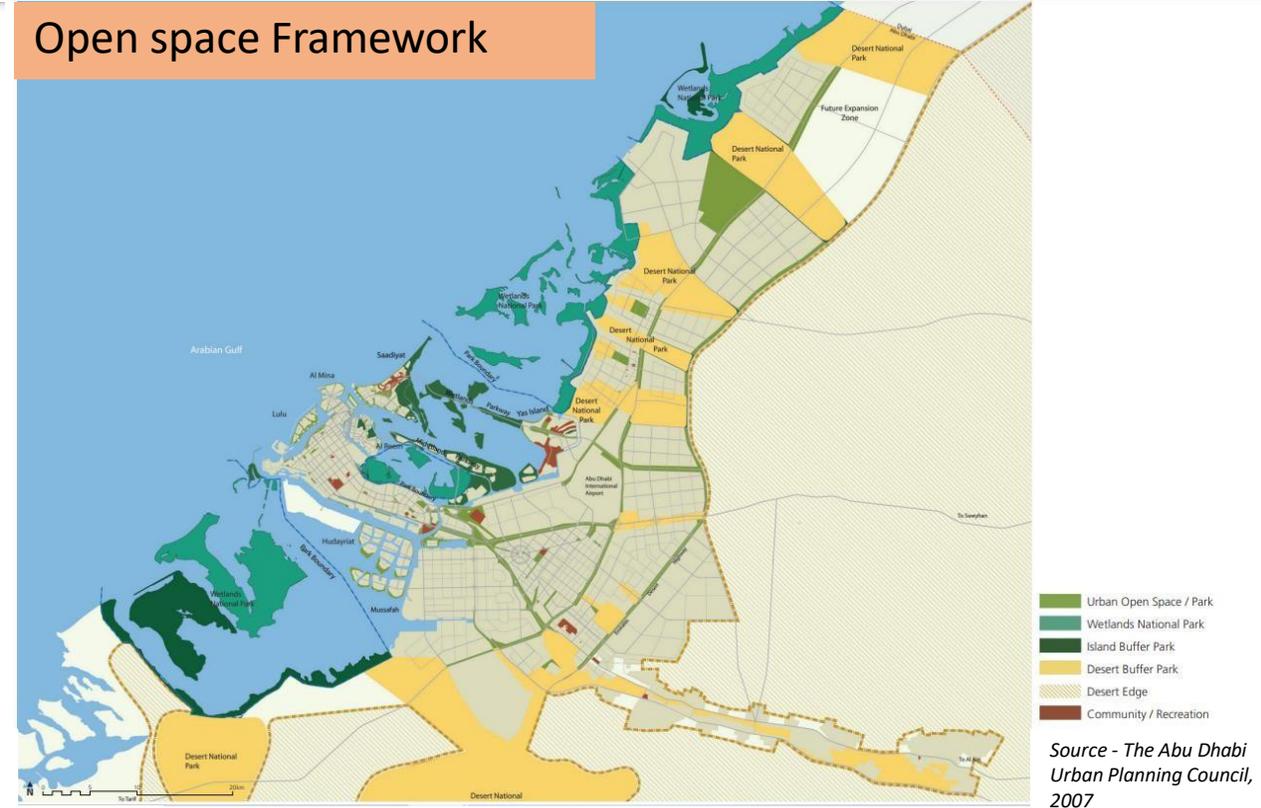
PLAN ABU DHABI 2030: THE URBAN STRUCTURE FRAMEWORK PLAN

transportation Framework



- Nothing is more fundamental to the smooth flow of traffic than the proper allocation of land use.
- 1. ECBD – connectivity is enhanced by making **through-roads** out of the dead end streets within the super blocks.
- 2. **New parkways** will shorten the driving distance to Dubai, provide alternate entry points to the new island developments, and take the traffic pressure off.
- 3. A **freight rail line** will operate in the same right-of-way, connecting the new port, airport, and Jebel Ali with the other GCC countries.
- 4. Surface light rail, streetcars and buses to ensure that no one ever has to walk more than five minutes to use **public transit**.

Open space Framework



- The Public Open Space Framework Plan is based on a hierarchy of open spaces, informed at a macro level by the Environmental Framework.
- 1. **City Parks** - The Mangrove Park is an 'urban wild', the Corniche a 'public water front', and Lulu a space for 'recreation, tourism and commemoration'.
- 2. The **community parks** ensure, that children have safe play areas close to their homes and all citizens can find green relief when they need it.
- 3. **Grade-separated parking frees up space** for a comprehensively planted public realm, and lowers the temperature of the microclimate by replacing hot metal and pavement with plants and permeable ground.
- 4. **Government and public buildings** like train stations traditionally have squares in front of them to emphasize their importance and create view opportunities.

Strategic Role of Urban Planning

Strategic Role

- Abu Dhabi Urban Planning Council (UPC) initiates, drives and supports Abu Dhabi's urban Development strategy **and ensures the development of a professionally designed and well managed urban environment** in the Emirate's towns and cities, complete with world class transportation systems.
- The UPC also implements best practice in planning for both new and existing urban areas. **The UPC liaises with other government departments, including the Environment Agency, the Department of Transport, Abu Dhabi Education Council, the Abu Dhabi Municipality and utility providers to discuss relevant development proposals and to coordinate a central, considered response to infrastructure demands.**
- The landmark Plan Abu Dhabi 2030 Urban Structure Framework Plan paved the way **to grow and take advantage of the economic opportunities at hand without sacrificing the best of the City's inherent cultures and customs**

Unique Urban Planning

- Principles Abu Dhabi has an ambitious target of rapid diversification and densification for the next 20 years. In 2030 the city of Abu Dhabi envisions the population to be three times its current size.
 - One of the key strengths of the UPC is its commitment to engage citizens in their physical environment.
 - **Ain 2030 and Al Gharbia 2030, major analysis of social, cultural and economic life in the Emirates was conducted alongside workshops involving leading urban planners**
-
- **The work of the UPC, which manages urban development to facilitate social and economic growth, aims to create a stronger sense of community and identity across the Emirate.**
 - The projects of the Abu Dhabi Urban Planning Council have a direct impact on the lifestyle component of the residents of Abu Dhabi.
 - In addition to the benefits and lifestyle enhancements that Abu Dhabi residents will experience, **the UPC will also act as an agent of change towards the overall experience of residing in and visiting Abu Dhabi**

Estidama

Launched in May 2008, Estidama, which means sustainability in Arabic, is Abu Dhabi's contribution to the global discussion of how to create more sustainable communities, cities and global enterprises. It is the result of a clear political vision that is intended to balance the four pillars of the environment, economy, society and culture in pursuit of a higher quality of life for all living things.

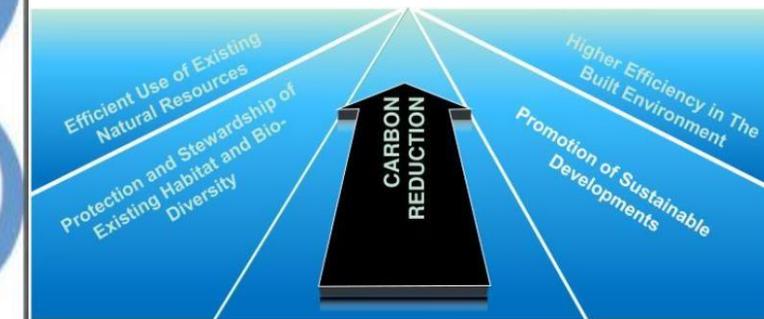
Estidama is more than just a sustainability program; Estidama is the symbol of an inspired vision for governance and community development. It promotes a new mindset for building a Forward thinking global capital.

Estidama is the first program of its kind that is tailored to the Middle East region and is intended to promote the concept of living in harmony with Abu Dhabi's culture and environment whilst conserving the Emirati way of life so that future generations can benefit from the wise choices made today.

Estidama creates a sustainability framework that allows for adaptation as Abu Dhabi evolves. Estidama, when fully expressed across Abu Dhabi's society, will touch multiple facets in people's daily lives the curriculum in schools, the way the sovereign wealth fund makes investment decisions, the way infrastructure is planned, calculated and constructed, the health of the land and marine ecosystems and sustainable sourcing of food and water



Vision for Environmental Improvement



Tools for Design And Assessment

The screenshot shows the 'Building Water Calculator' interface. It has a blue header with the 'estidama' logo. Below the header is a progress bar with steps 1 through 9. The main area contains a list of steps on the left and a 'Background' section on the right. The steps are: Step 1: Project Details, Step 2: Preliminary Types, Step 3: Preliminary Calculations, Step 4: Exterior Water Consumption (Initial Building Types), Step 5: Exterior Water Consumption (Other Building Types), Step 6: Exterior Water Consumption, Step 7: Water Balance, Summary 1: Credit Point Summary, Summary 2: Water Use Summary, Summary 3: Water Balance Summary.

The screenshot shows the 'Community Water Calculator' interface. It has a green header with the 'estidama' logo. Below the header is a progress bar with steps 1 through 9. The main area contains a list of steps on the left and a 'Background' section on the right. The steps are: Step 1: Project Details, Step 2: Building Types (Non-Residential), Step 3: Building Types (Residential), Step 4: Exterior Water Consumption, Step 5: Water Balance, Summary 1: Credit Point Summary, Summary 2: Water Use Summary, Summary 3: Water Balance Summary. A 'Key' section is also present, explaining the color coding for the steps.

The Pearls Rating System

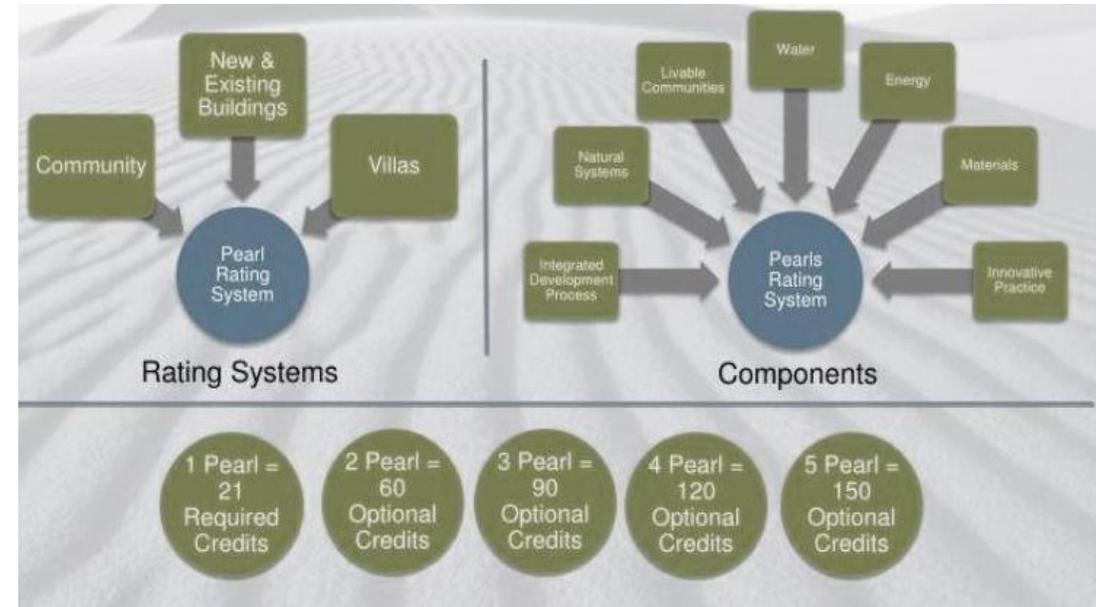
A comprehensive and practical way to assess levels of sustainability within developments, the Pearls Rating System will be a voluntary programme to be made available to developers seeking to achieve recognition for pursuing a higher level of green building and development

However, the Pearls Rating System is also distinguishable from other green building rating methods because it takes into account the culture of the country and requires accountability through a 'living rating' stage that assesses the actual performance of a building.

Pilot Projects and Stakeholder Engagement Estidama recently awarded 12 Estidama Excellence Awards to developers at the World Future Energy Summit in Abu Dhabi.

The pilot projects are aiming for Estidama compliance and are exemplary representatives of the goals of Estidama, offering a wide range of innovative solutions that meets the needs of both Abu Dhabi and the wider GCC region

32 teams were challenged to design a sustainable Emirati dwelling which incorporated the local traditional neighbourhood concept, the 'Fareej'.



Estidama Timeline



Estidama Integrated Approval Process



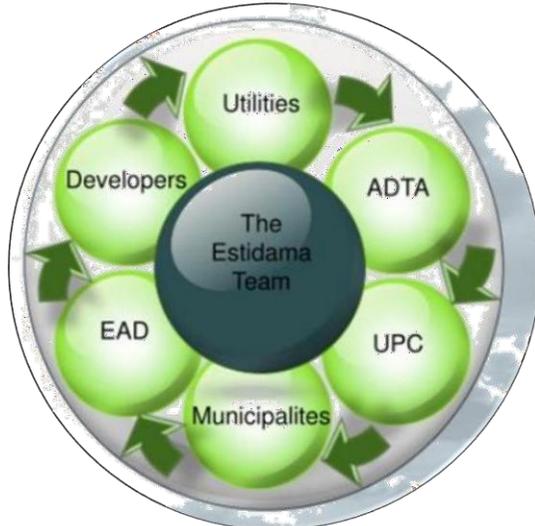
Development Review Process

The UPC's objective is to plan and regulate urban growth and development in Abu Dhabi. In particular to implement the guidelines and principles laid out in Capital 2030, Al Ain 2030 and Al Gharbia 2030 to achieve the highest levels of livability and sustainability. The UPC has established a streamlined process to review development proposals. This process now focuses on three approval streams that are designed to reflect the size and scale of the most frequent application types in Abu Dhabi

The UPC uses this review process for two main purposes:

- To ensure development proposals comply with the Emirate's urban planning policies (e.g. land uses, densities, Estidama);
- To coordinate the review and approval of development applications by external agencies and government bodies
- Provide the developer with information and direction to improve overall integration with the surrounding area;
- Provide the Urban Planning Council with the necessary data to make informed decisions on development applications; and
- Ensure a transparent, consistent system for all development reviews

Estidama
Training
Programme



THE CHALLENGES AHEAD

- The fundamental challenge for planners and regulators is to achieve a balance between economic development objectives and environmental, social, and cultural sustainability.
- constant expansion of economic activities has been an increased demographic imbalance, which is a major planning and social challenge for Abu Dhabi, and also for other cities in the Gulf region.

CONCLUSION

- The fundamental challenge for planners and regulators is to achieve a balance between economic development objectives and environmental, social, and cultural sustainability.
- constant expansion of economic activities has been an increased demographic imbalance, which is a major planning and social challenge for Abu Dhabi, and also for other cities in the Gulf region.
- Abu Dhabi has made great progress in articulating its sustainability vision, policies, and initiatives, and can move quickly towards detailing them into comprehensive and adaptable plans with clear implementation programs.
- Important urban strategies may be explored to ensure sustainable growth. These include the densification of Abu Dhabi Island instead of expanding development beyond the urban growth boundaries, combined with implementing an efficient multimodal rapid transit system.
- Additionally, the revitalization of the inner city and the CBD as part of a larger capital investment plan is vital to presenting Abu Dhabi City as a livable and vibrant city with a distinct identity.
- Finally, supporting the Masdar City development will be an important component in Abu Dhabi's long-term urban and economic transformation towards a sustainable future.
- Abu Dhabi has the potential to demonstrate that a bigger city or a bigger economy is not necessarily better. The implementation of the Abu Dhabi Economic Vision 2030 can allow it to emerge as a prosperous, resilient, and a world-class sustainable city.

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