Integrating Socio-Cultural Dimensions into Sustainable Urban Planning: Insights from Traditional Urban Forms in the United Arab Emirates

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ABSTRACT

This paper examines the interplay between social and cultural sustainability in shaping the spatial organization of communities, with a specific focus on traditional urban forms in the United Arab Emirates (UAE). It explores whether these communities integrate socio-cultural aspects architecturally and spatially, and how such integration can inform contemporary of sustainable development strategies. The paper commences with a review of the spatial morphology of traditional UAE urban forms, highlighting the influence of socio-cultural interactions on the arrangement of social spaces and daily practices. By focusing on the UAE's traditional communities, the paper underscores the importance of integrating social and cultural dimensions into sustainable urban planning. In the second part of the paper socio-cultural entity is illustrated through different models indicating the main pillars and components of sustainability. The third part of the paper includes conclusion and recommendations for the importance of integrating social and cultural dimensions into the UAE sustainable Urban Planning. The findings contribute to the broader discourse on sustainable development by offering insights into how socio-cultural sustainability can influence urban open space design, thereby advancing the pursuit of balanced, inclusive, and enduring built environments. The paper closes with a discussion of the insights that were provided and recommendations for future research areas.

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1. Introduction

This paper investigates the roles of social and cultural sustainable strands in the spatial organization of the community to find out whether UAE traditional communities incorporate these aspects spatially and architecturally and how these aspects can be used in our approaches to move toward a more sustainably built environment. Furthermore, as a reflection on the spatial arrangement of the UAE traditional community, the spatial morphology of the traditional urban form is discussed in depth. This, in turn, shows how the sequence and organization of different social spaces have been affected by the social and cultural interactions among people, between people and objects, and between objects themselves. Urban spatial organization is shaped by external forces interacting with primary infrastructure and regulations. Furthermore, spatial organization is usually the unintended outcome of unforeseen consequences of regulations and policies that were formulated without any particular spatial concerns (Baerlocher, 2008). The researcher argues that the configuration of outdoor activities, social spaces, and the daily lives and practices of individuals is significantly influenced by two key factors: social and cultural characteristics.

The review of the literature presented and discussed in this paper funnels down from the general and wider context of sustainable urban open space to the specific context of the sustainable development within the UAE (Ezzeddine, 2024). This paper then concludes with a section on the importance of the public urban square in the case of the UAE urban development.

2. An Overview of Sustainability

The concept of sustainable urban environments has become a critical approach in architecture and urban planning, addressing social, economic, and environmental aspects but presenting challenges for designers and planners (Nurse, 2006). Sustainability planning combines theoretical and practical frameworks to assist stakeholders in developing effective sustainability plans. While significant research exists on physical and environmental sustainability, limited focus has been given to the social and cultural influences of traditional settlements, which reflect socio-cultural connections and values through their spatial organization (Taleb & Sharplas, 2011).

Sustainability integrates economic development, environmental preservation, and socio-cultural equity, requiring community involvement to balance competing interests (Chiu, 2004). Public health and well-being are increasingly recognized as vital components of sustainable environments. Since the 1980's, governments have prioritized environmental sustainability, influenced by earlier environmental movements and international efforts such as the 1972 UN Stockholm Conference and the Brundtland Report (1987). The Brundtland Report defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs," emphasizing the interconnectedness of social, economic, and environmental concerns.

The Rio Earth Summit (1992) further articulated sustainability through Agenda 21, highlighting human well-being as central to sustainable development (Williamson et al., 2004). Scholars propose a "three-legged stool" model of sustainability, balancing ecology, economy, and equity, Figure 1 (Moore, 2007). Social equity and environmental protection, involving human health, safety, and resource efficiency, are essential for sustainable development. However, research has predominantly focused on environmental factors, with limited exploration of social and cultural sustainability and their impact on the built environment (Guy & Farmer, 2001).

This paper emphasizes the role of values and beliefs in achieving sustainable development, particularly in the traditional community environments of the UAE. It identifies gaps in literature regarding social and cultural sustainability, proposing an integrative approach to bridge theory and practice despite political, technological, and other constraints (Matthew & Hammill, 2009).
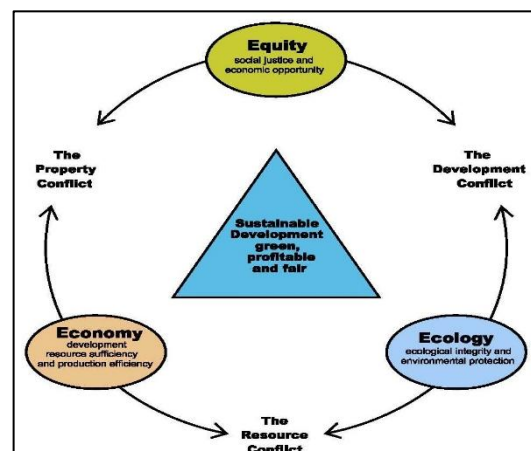
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Figure 1: The 3 Es of sustainability

Source: (Moore, 2007:5)

The interrelated combination of social equity and environmental protection represents the most crucial issue in achieving sustainability. The former concerns privacy, safety, security, human health and well-being of humans, while the latter deals with the consumption of natural resources, energy efficiency, and environmental impact on the biodiversity of habitats (Eldemery, 2002; Steptoe & Shankar, 2013). Transitions in social and environmental issues, with all their complexities and ambiguities, are largely presented in transforming approaches toward the development of sustainable architecture and built environment (Guy & Farmer, 2001). Environmental factors have been studied extensively, but literature focused on social and cultural sustainability is limited, and a comprehensive study of these concepts is still missing. Most scholarly research about the environment considers physical and environmental concerns with little reference to the impact of social values and cultural beliefs on the sustainability and continuity of this environment. The emphasis of this paper is on the latter, namely, values and beliefs, in achieving more sustainable development. It investigates their role in the physical formation and spatial organization of the traditional community environment in the UAE. It discusses initially the general concepts of social and cultural sustainability and identifies areas common to these concepts (Chiu, 2004).

Although it is generally accepted that sustainable development requires a blend of the three pillars of Economic Development, Social Equity and Environmental Protection, the fundamental conceptualization of sustainability is still unclear. Since the publication of the Brundtland Report and the Rio Summit, it has been accepted worldwide that sustainable development is a worthwhile goal and many governments have devised metrics for sustainable development, despite implementation being problematic. (Matthew and Hammill, 2009:1120) note that the main problem lies "in designing the move from theory to practice. Here the tenacious grip of technological, political and other constraints becomes clear".

3. The concept of Social Sustainability

"Perceived needs are socially and culturally determined, and sustainable development requires the promotion of values that encourage consumption standards that are within the bounds of the ecological possible and to which all can reasonably aspire to" (WCED, 1987:44).

According to the WCED (1987), sustainable development involves promoting values that align consumption standards with ecological limits and are universally attainable. Social sustainability is crucial in urban development, as it enhances community well-being and fosters sustainable primary open spaces in new developments (Javadi, 2016). It occupies a central role in the triangular model of sustainability, alongside environmental and economic aspects (Figure 1).

Colantonio (2007) emphasizes that social sustainability is rooted in societal assets, customs, and processes that enable communities to achieve long-term, equitable goals. Built environments are shaped by social norms and values, reflecting cultural traditions and interactions. Thaman (2002), cited in Chiu, 2004) states that sustainability must be anchored in people's social and cultural values. Polèse and Stren (2000) further argue that the architecture of homes and spatial organization in communities supports societal harmony and the continuity of everyday life as a sustainability approach.

Social sustainability also promotes cohesion, stability, and improved quality of life by fostering inclusion and equity across all societal levels (Chiu, 2004). It connects ethical principles and social relations, addressing the equitable satisfaction of basic human needs (Nurse, 2006). Traditional UAE built environments, such as Al Fereej, exemplify this, sustaining resources over centuries while adapting to change and fostering social integration, interaction, and cohesion (Patrick & Roseland, 2005). These environments promote harmonious cohabitation of culturally and socially diverse groups, enhancing the quality of life and instilling a sense of belonging and identity (Forrest & Kearns, 2001).

The Vancouver model of social sustainability illustrates how these values social inclusion, equity, and cohesion can be integrated to create sustainable and resilient communities (Figure 2).
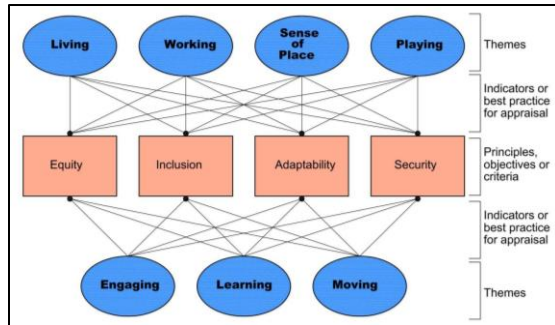
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Figure 2: Vancouver model of social sustainability

Source: (Colantonio & Dixon, 2010:1070)

4. The importance of culture in sustainability

Research over two decades highlights culture as a foundational element of sustainability, rooted in the values and behaviors of individuals and societies. Culture encompasses spiritual, material, intellectual, and emotional characteristics, including traditions, beliefs, and ways of life. Key cultural elements such as social structures, values, and norms are essential in shaping sustainable practices. The anthropological perspective emphasizes the dynamic interplay between cultural and social dimensions, illustrating how traditions, heritage, and societal interactions contribute to sustainability.

Models like Campbell's triple-bottom-line and the four-pillars model integrate culture as a vital component alongside environmental, economic, and social factors (Figure 3). These frameworks underscore the importance of cultural identity, self-reliance, social justice, and ecological balance in achieving sustainability. Examples such as Dubai's historic architecture showcase efforts to blend traditional and contemporary values in sustainable development.

Figure 3: The four well-beings' model of sustainable community

Source: (Duxbury & Gillette, 2007:15)

The main objective of this model is in mediating factors and competing priorities in the search for the value represented by the center of the model (Guy & Farmer, 2001). Duxbury and Gillette (2007) argue that culture is an essential value that allows for change to take place in a coherent way, with people's cultural values providing a specific identity to the place over time. This culture-place-time intertwined relationship is inseparable from and enriched by the social properties of society. It emphasizes the dynamism of culture, as discussed earlier, over the course of time and maintains its diversity along with social history, traditions with social values and heritage with categories of places (Chiu, 2004). These cultural values have been inherited in tangible and intangible forms from the past and have been passed on to future generations, thus, fostering privacy and social inclusion, social interaction, public relationships and ecological preservation (Duxbury & Gillette, 2007). An example of such a scenario is the case of the historic building and former home of Sheikh Saeed bin Maktoum Al Maktoum, a ruler of Dubai built in 1894 along the Dubai Creek in Al Shindagah old district. It epitomizes the attempts to include the traditional, physical components in the design and of contemporary housing developments (Al Sammani, 2011).

Such critiques led the approach toward an alternative framework where culture is introduced as a key factor and fully integrated with other principles, in the search for the conceptualization of the meaning of sustainability (Figure 4). This approach is utilized, in a way, to present: (a) a specific cultural identity where social elements are rooted in cultural values; (b) a self-reliant community which depends mainly on its social and cultural resources; (c) the concept of social justice which gives priority to those most in need; and (d) an ecological balance of the different resources (Nurse, 2006). This approach demonstrates, as Sachs (1999, cited in Vallance, Perkins & Dixon, 2011:343) argues the utilization of cultural aspects, as balancing issues between externally imposed changes and internally developed environments.
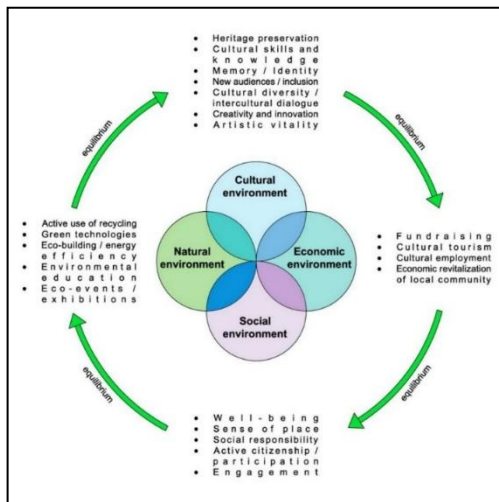
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Figure 4: The four-pillars/dimensions model of sustainability

Source: (Runnalls, 2006, cited in Duxbury & Gillette, 2007:14)

5. Common social and cultural aspects of sustainability

Social and cultural aspects are closely intertwined and often difficult to separate, influencing each other within society. These aspects encompass social values, cultural beliefs, norms, customs, and lifestyle. Social factors focus on the well-being of individuals, while cultural elements maintain continuity and identity. Chiu (2004) identifies four key social aspects essential for sustainable environments: (1) social requirements for sustainability, (2) justice in resource distribution, (3) harmonious social interactions, and (4) acceptable housing quality. These aspects overlap with cultural dimensions, particularly in preserving traditional properties and housing heritage (Figure 5).
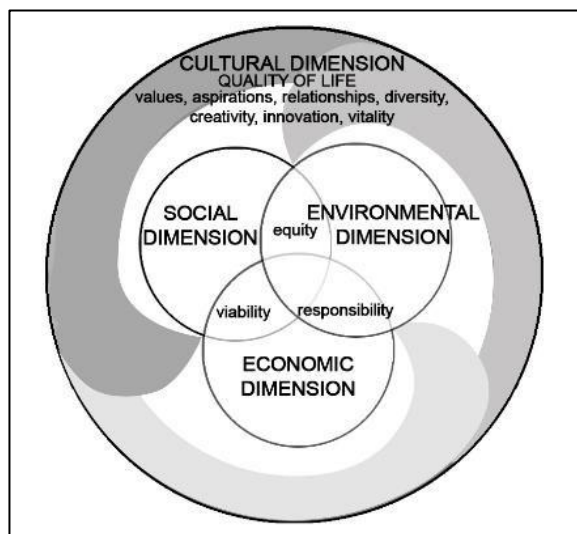

Figure 5: The four aspects of the social dimension Source: (Runnalls, 2006:20)

Social factors are intangible, covering privacy, social cohesion, equality, and inclusion, while cultural factors are tangible, such as rituals, customs, and religion. Despite their differences, both are evident in the design and function of social spaces in traditional homes, where privacy influences spatial arrangements and public and private areas are used flexibly during social and cultural events. In spite of the commonalities between them, they are, in fact, not the same and each relates to specific areas of concern. This kind of separation or distinction can be clearly highlighted and portrayed in the architecture of houses where residents' customs and habits have a distinctive role in its order and arrangement. The design and use of the house accurately reflect this diversity, as well as their integrated relationship (Chiu, 2004). Privacy, as a social issue, for example, affects the spatial organization and functional performance of the space at the entrance of the home, which forms a type of bend preventing any kind of direct visual intrusion by strangers or guests outside the house. At the same time, the private area dedicated for family or the courtyard, in a more traditional context, turns into a public space and can be accessed by guests during different type of festivities or religious events. During such occasions, social spaces on the first floor are typically used by members of the opposite sex to observe and monitor activities on the ground floor. These practices illustrate the seamless integration of social and cultural factors into the design and use of social spaces in traditional houses.

1. SUSTAINABILITY IN URBAN FORM

Sustainability, in all its principles, especially social and cultural factors, plays a fundamental role in the formation of the built and urban environment through maintaining equity and social inclusion and diminishing negative environmental impacts. The fairness and validity of any built form depend largely on the achievement of a dynamic and continuous balance between these competing and conflicting issues. Meanwhile, social and cultural diversity has a significant impact on the continuity and dynamic systems of the urban form, achieving long- term health and validity. This diversity, as discussed earlier, explains and highlights its ability to adapt to change

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(Dempsey & Jenks, 2005). Wheeler (2014 cited in Dixon, 2011:4) states that sustainable urban form includes a clear focus on the importance of social factors in achieving a more sustainable built space. He argues that sustainability is the "development that encompasses the long-term social and ecological health" of built forms. This approach relies primarily on the actions to be taken today, depending on existing, inherited values and characteristics. By contrast, Richardson (1992, cited in Parker, 2004:167) relied on the impact of the natural environment in the formulation and achievement of a more sustainable urban form. He explained the significance of the human-environment relationship, lifestyle and people's inspirations in the formulation of the main tools and the correct settings for a sustainably built form. This approach presents, moreover, the socio-spatial factor in the mutual relationship between humans and the surrounding environment.

The overriding objective of achieving a high quality of life for people in any context within a socio-cultural framework is a fundamental basis for a sustainable urban form. The wider meaning of these integrated factors determines human life, the socio-spatial relationship, social interactions and cultural values of individuals and society. In line with this, Dempsey and Jenks (2005) state that many social and cultural principles need to be included in the context of sustainability. Their perspective is revealed by the 'polycentric form' which is closely linked to appropriate public transport systems, allowing ease of access and sustainable social and cultural behavior, which involves all individuals residing in the neighborhood (Clifton, 2010; Dempsey & Jenks, 2005). These properties highlight the concept of compactness as a new paradigm for and a major factor in sustainability (Ben-Hamouche, 2008). Wheeler (1998, cited in Dixon, 2011:4) suggests the compact urban form as a fundamental approach to sustainable urban form, restoring natural systems and providing better living environments, a healthy social ecology and good cultural preservation. This perspective brings to mind the urban form and spatial organization of the traditional neighborhood unit (*Al Fereej*) in UAE. This form, displayed for several centuries, is a perfect example of homogeneous social and cultural relationships between its users and a hierarchical sequence of narrow, bent and shaded streets and spaces from private areas to the public ones (Al-Hemaidi, 2001). Different factors such as access methods, privacy, social segregation, social inclusion and

interaction can best describe it. This perspective ensures proper and easy access to all houses, workplaces, services, facilities and social spaces, all the while respecting existing and inherent social and cultural values, habits and customs of the community. It offers, moreover, a "coherent way to integrate ecological thinkers with all social and cultural planning factors" (Dixon, 2011).

Traditional urban form displays a high variety of activities which give life to the community, and, thus, achieve the sustainability of the liveable place and the whole urban fabric. The degree of diversity was popularized by Jacobs (1961) and accepted by many scholarly studies on the built environment, such as the smart growth, new urbanism and sustainable development. For Jacobs (1961, cited in Jabareen, 2006:42), this issue is vital and necessary to avoid the decline and deterioration of the built form becoming just an expression of a place of living. Diversity in the urban form is a 'multidimensional phenomenon' indicating some similarities between this issue and the concept of mixed land uses, in a specific context. This phenomenon promotes many essential features, different house typologies, household sizes, cultures and social styles (Turner & Murray, 2001). It supports and maintains the socio-cultural factors of the built environment. In traditional contexts, diversity was promoted by the spatial and physical variety of buildings and urban properties which relied significantly on social and cultural values derived from Islamic culture, principles and elements. This variety showed a high degree of unity. By contrast, if these contexts are not diverse, according to Wheeler (2002, cited in Jabareen, 2006:42), "then homogeneity of built forms often produces unattractive, monotonous built forms; a lack of housing for all income groups, class and racial segregation…" as is the case in most contemporary developments in the Arab world.

Diversity in traditional contexts has inspired many scholars in their attempts to better, built forms, on the basis of a neo-traditional approach to the employment of social, cultural and physical characteristics (Wey & Hsu, 2014). This approach, which is known as the new urbanism approach, is a design-oriented one, which, according to Bohl (2000), depends primarily on traditional precedents for the creation of adequate ways to connect different housing varieties to form a neighborhood unit. The latter displays the basic planning unit, which is limited in its physical size, and consists of a central, public open space with well-

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defined edges (Campbell, 2003). Scholars of this approach believe in the need for diversity of residential features, which can satisfy users, support good social contacts, achieve a strong sense of community and human interaction, and enhance relevant social and cultural relations, rather than just being super-blocks and typical residential units. Wheeler (2002, cited in Jabareen, 2006:42) argues that diversity in traditional contexts is among the most attractive, vibrant and popular concepts and requirements, instead of forced zoning which works against the diversity of the built form. This approach emphasizes specific categories of sustainable urban form represented by the establishment of a self-contained district promoting the concept of mixed land uses in a tightly clustered context and indicating the preference of having a high- density environment and walkable urban pattern. The application of the latter model demonstrates a variety of path options and a sequential spatial order and encourages social and cultural interaction in different types of open public spaces (Wey & Hsu, 2014). The main problem with this movement, according to Harvey (1997, cited in Campbell & Feinstein, 2003:183), is that the new approach of urbanism gives little attention to social factors in terms of creating social inequalities as is the case in modernism.

7. Sustainable built environment as a socio-cultural entity

Sustainability, particularly in social and cultural factors, plays a crucial role in shaping the built environment, ensuring social inclusion, and reducing environmental impact. Achieving sustainability requires balancing social, cultural, and environmental concerns, with diversity enhancing the adaptability of urban forms. Wheeler (2014) emphasizes the importance of integrating social factors to ensure long-term social and ecological health in urban environments. The relationship between people and the environment, alongside inherited values, shapes sustainable urban forms. Dempsey and Jenks (2005) highlight the importance of including social and cultural principles in sustainability, particularly in promoting a compact urban form supported by public transport systems, which fosters social interactions.

Traditional urban forms in the UAE, such as the Al Fereej neighborhood, exemplify the integration of social and cultural factors with spatial organization. Narrow, shaded streets and private-public space hierarchies promote social interactions while respecting cultural norms. This diversity ensures a vibrant, sustainable community. However, modern developments often lack such diversity, leading to monotonous, segregated spaces. The "new urbanism" approach seeks to revive these traditional principles by emphasizing mixed-use, high-density neighborhoods that support social cohesion and cultural diversity. However, critics argue that it sometimes neglects social inequality.

8. Locality in sustainability

Urban development in many developing countries, particularly in the UAE, has led to modern settlements that often neglect traditional cultural, social, and environmental values, resulting in a loss of identity and disconnection from heritage (Taleb, 2006). Quick, externally influenced solutions to development have imposed foreign models that don't align with local traditions. The importance of local architecture, rooted in socio-cultural values, is key to achieving sustainability. A deep understanding of local environments helps in creating sustainable spaces that respect cultural heritage and promote continuity. Furthermore, the concept of locality in sustainability highlights the role of the environment in shaping social, cultural, and physical relations. It suggests that global solutions should be tailored to local needs, respecting the cultural and environmental context. Many Arab societies are experiencing the effects of modernization, which has disrupted traditional social and cultural systems. Eldemery (2002) advocates for local architects to bridge the gap between the past and present by creating sustainable environments inspired by cultural heritage.

8.1. Understanding and Applying Approaches to Sustainable Development to Urban Open Space

Different approaches to sustainability in urban communities focus on three core areas:

• Healthy environment: Minimizing ecological impact, promoting recycling, and creating spaces for physical and social well-being.

• Prosperous economy: Generating wealth without depleting natural and social capital, minimizing resource use, and meeting local needs.

• Social well-being: Building a sense of security, belonging, and cohesion, while respecting diverse cultures and backgrounds.

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In the UAE, urban planning policies should incorporate these principles into the design of open spaces, considering factors like accessibility, aesthetics, temperature mitigation, and the use of eco-friendly materials. These factors will help enhance public interaction in urban squares, requiring carefully planned strategies for sustainable development (Dovers and Handmer, 1992).

8.2. Linking Urban Space and Sustainability

8.2.1. The importance of sustainable urban development

Sustainability is crucial in urban planning and architecture, as it integrates social, cultural, and environmental concerns. Open spaces are fundamental in fostering social sustainability by encouraging interaction among residents (Harun et al., 2014). Social sustainability is vital for community development, where spaces are designed to enhance community cohesion and interaction.

8.2.2. Sustainable urban development and social life

Social sustainability focuses on how environments are shaped by societal norms, customs, and values. According to Thaman (2002), sustainability is rooted in social and cultural values. Sustainable development should reflect the needs, values, and relationships within a community, ensuring that social spaces foster harmonious cohabitation and cultural integration. This approach promotes values that enhance social relations, ensuring that communities remain cohesive and culturally respectful. Polèse and Stren (2000) highlight that the design of spaces should support the diverse cultural and social needs of the community.

9. Sustainable resource and environmental management in the UAE: Current situation, community perceptions and proposed new policy frameworks

Based on the main objective of this thesis, which is to develop a new framework for sustainable environmental resource management in UAE, a review of relevant literature was carried out. The literature review focuses on the theoretical and practical basis of sustainable development and their application in the UAE. Sustainable developmental frameworks are inherently linked to the evolution of development theories, resource management paradigms and their application in the MENA region,

specifically in the UAE. Therefore, relevant literature is needed in order to identify a sustainable managing framework appropriate for the UAE. Furthermore, the UAE and the MENA Region are viewed from the perspective of global development theories and trends. Hence, in order to develop a foundation for the sustainability process, the government has undertaken to create a revised policy framework that addresses sustainable development issues in the UAE.

The way in which a society responds to development theories is a key indicator of community priorities, national institutions and their perceptions, and the resources used in practice are determined and shaped by the management of environmental resources. Thus, the impact of development theories on a society and how resultant changes are managed by institutions, either through the development of policies or through debate, dialogue and stakeholder consultation, are also reviewed in order to be applied within the context of the UAE.

There are three main objectives in this paper. The first is to identify and review the literature pertinent to the research questions and problems. Secondly, the development and justification of theoretical and methodological models have to be understood in order to carry out the subsequent empirical investigations in this current study. Finally, this paper defines and clarifies the key concepts that have been used in reference to the current study and that must be applied in the UAE.

10. Sustainable development: Definition and principles

Sustainable development (SD) is commonly defined by the Brundtland Commission as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Cerin, 2006). The ultimate goal of SD is to achieve long-term stability in both the economy and environment by integrating social, environmental, and economic concerns in decision-making. Unlike traditional environmental policies, SD emphasizes conserving resources for future generations. SD is strengthened when acknowledging that natural resources cannot be replaced by manufactured capital. Ecologists and environmentalists typically support this view. Additional fundamental SD principles include intergenerational equity (ensuring sustainability for future generations) and the polluter pays principle, which holds that polluting entities

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should bear the costs of their actions (Dernbach, 1998). The precautionary principle requires action to prevent environmental harm even in the absence of full scientific certainty (United Nations Conference on the Human Environment, 1992).

The Rio Declaration affirms that every nation has a role in SD, with more responsibility resting on developed nations due to their greater environmental impact. SD's basic principle is integrating environmental, social, and economic factors into decision-making. This requires breaking down silos between sectors for comprehensive planning and policymaking.

10.1. Theoretical Perspectives on SD

SD is rooted in three core foundations:

• Ecological Sustainability: Focuses on the limits of biological growth, recognizing the finite nature of resources, a perspective often referred to as the "Fixed Stock Paradigm" (Tilton, 1996).

• Sustainable Economic Growth: Argues that SD can coexist with economic growth if the economy grows at its own pace, focusing on integrating economic and environmental concerns (O'Riordan, 1981; Barbier, 1993).

• Sustainable Societies: This social approach emphasizes equity, justice, and the eradication of inequality, focusing on poverty alleviation and human rights, alongside intergenerational equity (Chambers, 1986; Mies & Shiva, 1993).

10.2. Participatory Management Approaches

Participatory management involves the active engagement of communities and stakeholders in policy formation and decision-making. It fosters transparency and accountability while encouraging greater responsiveness from communities in implementing management objectives proposed a framework of eight stages, from manipulation to citizen control, showing increasing community empowerment. In community-based management, local communities share responsibility with external organizations for resource management (Pomeroy & Williams, 1994)

11. Difficulties in implementing SD

Despite widespread acceptance, SD implementation has largely failed, particularly in improving the lives of the poor (Moyo, 2009). The integration of the economic, social, and environmental pillars of SD remains a significant challenge, requiring time and effort from all stakeholders.

UN summits have often resulted in broad discussions and sprawling documents but lack concrete action plans. High-level meetings like the CSD and UNFCC have struggled to produce practical solutions for transitioning to a sustainable, low-carbon economy (Hodas, 2010). Market-driven economic planning, prioritizing growth, has further slowed transformational progress, with incremental changes being the norm. The WBCSD highlights a lack of strong leadership as a key barrier, as politicians, businesses, and consumers resist actions that might lead to higher costs for the sake of SD (Holliday, Schmidheiny, & Watts, 2002).

Developing countries face additional obstacles, such as limited financial resources, inadequate technology, and unfair trade terms, which hinder access to infrastructure and governance systems needed for SD (Economic Commission for Africa, 2002). At the national and local levels, SD strategies have yielded minor results, such as increased public awareness and academic debates, but have not fundamentally altered economic management (Chasek, Downie, & Brown, 2010).

One core issue is the tendency to address the symptoms of environmental degradation rather than its root causes. MacNeill (2007) attributes this to weak institutions and policies focusing on short-term fixes rather than systemic reforms in fiscal, tax, trade, energy, and agricultural policies. Additionally, governments have failed to dismantle departmental silos to develop integrated, comprehensive solutions.

12. Moving forward with SD

Despite critiques labeling SD as a failure, its systemic nature and the need for lifestyle shifts make two decades a brief timeframe for meaningful change. Addressing SD requires a global transformation in business practices, consumption patterns, and priorities, particularly in the face of resistance to changes that challenge economic growth models.

The 2008 financial crisis and diminishing trust in globalization highlight the potential for a new SD paradigm focusing on equity, poverty reduction, and resource sustainability. A shift from incremental to radical systemic changes is essential, supported by the

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growing "green economy" sector, which includes renewable energy, green buildings, clean transportation, and resource management. Stimulus spending on green initiatives shows promise but needs strong policy incentives to ensure long-term sustainability.

Key recommendations for advancing SD implementation include:

• Expanding SD Beyond the Environmental Sector: Adopting an integrated approach to energy, security, trade, and development while breaking down silos between ministries.

• Developing New Economic Metrics: Measuring and reporting on the integration of trade, finance, and environmental agendas.

• Accountable Implementation: Transitioning from dialogue to concrete actions with measurable milestones.

• Performance-Based Evaluation: Ensuring transparency by focusing on impacts rather than procedural achievements.

• Public-Private Partnerships: Encouraging sustainable investments through collaboration and incorporating private sector input into policymaking.

• Effective Communication: Highlighting SD successes to maintain momentum and foster global engagement.

13. The UAE and architectural heritage conservation

Over the past two decades, UAE authorities have actively restored historic areas in Abu Dhabi, Dubai, and Sharjah. Conservation efforts began after unplanned modernization in the 1970s led to the demolition of historic sites (Bukhash, 2012). Restoration projects, such as those in Al Shindagah and Al Bastakia (Dubai) and Al Merraija (Sharjah), focused on preserving architectural elements and social spaces like narrow passageways (Sikka) and open squares (Al Sahat).

The conservation plans restored key elements such as buildings, narrow passageways, and public squares (Al Sahat), turning these areas into active heritage centers for tourism and cultural engagement. The establishment of the Historical Building Department supported scientific restoration practices, ensuring that

significant urban elements like Al Sahat remain protected by law. Current strategies aim to create vibrant, multifunctional historical areas that blend tourism, culture, and residential activities, contributing to the revitalization of urban heritage.

Key initiatives include:

• Establishing the Historical Building Department to lead scientific conservation efforts.

• Enforcing laws to protect historical areas and integrating them into urban planning.

• Transforming heritage sites into cultural and tourist centers, fostering a connection between the past and present.

• Authorities emphasize a balanced mix of tourism, culture, heritage, and residential activities to revitalize historical areas.

14. Conclusion & recommendation

In conclusion, this paper highlights the importance of integrating sustainability, particularly in terms of social and cultural dimensions, within urban planning. It underscores the role of the built environment in reflecting the socio-cultural identity of communities, focusing on the UAE context. Sustainable urban development and its relationship with social life, alongside environmental management and policy frameworks, were discussed. This paper stresses that incorporating sustainability in urban planning is complex and requires the active involvement of communities through participatory processes.

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• Performance-Based Evaluation: Ensuring transparency by focusing on impacts rather than procedural achievements.

• Public-Private Partnerships: Encouraging sustainable investments through collaboration and incorporating private sector input into policymaking.

• Effective Communication: Highlighting SD successes to maintain momentum and foster global engagement.

15. Discussion

Integrating socio-cultural dimensions into sustainable urban planning remains a topic under active exploration, requiring further investigation by urban planners and local decision-makers. This paper provides a comprehensive effort to clarify strategic choices, supported by models, that could play a crucial role in designing strategies to implement urban public spaces that align with the socio-cultural characteristics of UAE communities.

The advantages and disadvantages of each strategic choice are discussed, distilled from a thorough review of recent literature. These strategies often present dual or multi-faceted paths, leading to varying decisions that significantly impact the outcomes of smart city initiatives. Determining the optimal option remains open to debate, as many proposed or applied sustainable development strategies fall between the extremes of available strategic choices.

Additionally, this paper focuses exclusively on strategic choices with spatial implications. However, several other strategic decisions, lacking direct spatial reference, require consideration in the sustainable urban planning process. For instance, whether to adopt an open innovation or closed innovation model is a critical question. Similarly, the choice of a business model and its social implications on the sustainable development process is another significant factor. While these strategic choices are occasionally referenced in the literature, they have not been systematically categorized or comprehensively documented to date.

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