



Applicable Comparative Study for Sustainable Urban Development Strategies.

دراسة تطبيقية مقارنة لإستراتيجيات التطوير العمراني المستدام

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KEYWORDS:

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المخلص العربي: تهدف خطط التنمية العمرانية المستدامة إلى الإرتقاء بالإنسان و المجتمع خاصة المناطق ذات الطبيعة الخاصة. يهدف هذا البحث إلى تحليل و مقارنة بعض سياسات التطوير العمراني المستدام وأثارها علي الاقتصاد والبيئة والمجتمع ومدى تفاعل الانسان مع التطوير للوصول لآليات التعامل المعاصرة والمناسبة للبيئات المشابهة. ولتحقيق هدف هذا البحث تم اتباع عدة مناهج بحثية بدأت بالمنهج الوصفي لمشروعى الواجهه البحرية بمدينة كيب تون بجنوب أفريقيا (Victoria & Alfred Waterfront) والتنمية المستدامة بواحة سيوة بمصر. قديما تميز المجتمعين ببيئة طبيعية مميزة و مجتمع ذو طبيعة متفردة. ثم المنهج التحليلي المقارن لما تم اتباعه ووضع من خطط وحلول لتنمية المجتمعين ، الأول مخطط تنموي للواجهه البحرية والثاني تلقائي معتمدا علي طبيعة المكان الصحراوية و طبيعة السكان. وخلص البحث إلى صياغة بعض استراتيجيات التطوير العمراني المستدام للمجتمعات ذات الطبيعة المشابهة

Abstract—Sustainable urban development strategies aim at the renaissance of man and society through different aspects. This paper aims at is analyzing the different development strategies and its impact on economy, society and environment. In addition to studying the interaction between man: his needs and expectations, his habits and traditions, the surrounding environment and acceptance to the new development. And to reach some contemporary development strategies that works for such similar cases. The research starts with a descriptive approach of the two projects (Victoria & Alfred Waterfront, Cape Town, South Africa and Siwa's Sustainable Development Initiative, Siwa, Egypt. Both of them used to be local community years ago with natural environment resources, people's traditions, cultural heritage and urban fabric. Then an analytical approach for the strategies and solutions set for developing each of them. Their development over 20 years has transformed them to take a new shape. The first has been through enormous urbanization process through a comprehensive waterfront master plan, the other has been through a natural, respecting community nature development. The research ends with a predictable approach for strategies can be used in similar cases seeking for a sustainable urban development.

I. INTRODUCTION

THE Victoria and Alfred Waterfront development (V&AW) is the most visited tourism and leisure place in South Africa¹. Cape Town used to be a refreshment station on a shipping route between Europe and Asia. The town had passed many transitions through decades from an English colony with local economy to a harbor starting with one basin, Alfred Basin, then expanded and another basin was added, Victoria Basin...

New master plans were set to develop the fishing and shipping harbor to turn out to witness a distinguish waterfront transformation: hotels, restaurants, shopping centers, fishing and shipping harbor and leisure attractions².

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Figure 1 Aerial views of V&AW Residential and Marina basin in 1980s and 2012.

New master plans were set to develop the fishing and shipping harbor to turn out to witness a distinguish waterfront transformation: hotels, restaurants, shopping centers, fishing and shipping harbor and leisure attractions².

On the other hand, Siwa Oasis, Egypt lies in the western desert, only 300 km southwest of Marsa Matrouh³. Siwa had a historical background of temples, tombs and other remains. Siwa is famous of the Oracle of Amon and used to be considered as a religious center and destination for many leaders⁴. Siwa used to be a trade transit route for trade caravans. Siwa is famous of cultivating dates and olives, depends on water springs and has a salt lake³.



Figure 2 Old town of Shali in Siwa Oasis– Siwa – Egypt.

EQI (Environmental Quality International is a private consulting firm), started privately investing in Siwa through a sequence of community-based initiatives that formed a private-sector led development initiative, called the Siwa

Sustainable Development Initiative. Emphasis is placed on hiring locals, applying traditional systems of building and environmental management and using local materials and local agricultural products⁴.

II. INTERNATIONAL CONTEXT

Cape Town is located at the southernmost tip of the African continent covering an area of more than 1.2 million square kilometers. The topography varies enormously from sun-scorched deserts, mountains and plains to lagoons and coastal wetland. Climate differs from sub-tropical to the Mediterranean-style climate².

Infrastructure in South Africa is developed and serves almost 45 million people. The population is Miscellaneous with different cultural and ethnic backgrounds. English is one of many spoken languages. The Western Cape has had an unceasing 3% annual economic growth rate over the past decade².



Figure 3 Cape Town location

Siwa lies in the western desert of Egypt, 560km from Cairo and 70km to the Libyan borders. With an area of 1.125 km² and a population of 20,000, and consists of five villages. The population consists of 53% men and 47% women. Temperature in summer can reach 50°C with a minimum 20°C while in winter 25°C during the day and -2°C at night in winter. Rain rarely drops in.

Siwa had a traditional built manner of kershef (salt-rock) stone in addition to palm roofs. While the government constructed buildings using concrete, red brick and plaster finish. This persuaded the Siwans to quit their traditional building material and techniques and to use concrete which is not suitable to their climate³

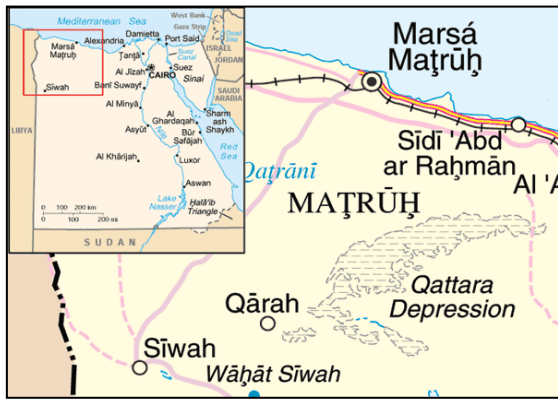


Figure 4 Siwa Oasis-Egypt location



Figure 6 The V&A Waterfront map

III. PROJECT COMPONENTS

A. V&AW, Cape Town: 5

- 64% (383,833sqm) has been developed. 36% (220,035sqm) available for development.
- 10 Hotels (Boutique, 5 star, 4 star & 3 star), including a One& Only Hotel.
- 450 retail shops.
- 150 commercial tenants.
- 80 restaurants & cafes.
- 600 built and sold luxury apartments, townhouses penthouses, with further under development.
- 400 rental apartments and self-catering units.
- 8,500 parking bays.
- 22 Historical and cultural landmarks.
- 20 leisure attractions.
- 1 SME business incubator-Craft market.
- 1 SME business incubator-Fresh & Organic Food market.
- 200 Small business enterprise incubator stalls.
- Extensive children's entertainment & aquarium

B. Siwa's Sustainable Development Initiative: 4

- Adrere Amellal.
- Shali Lodge.
- Siwa Women's Artisanship Initiative.
- Sustainable Agriculture, Cattle Initiative.
- Renewable Energy
- Other community development projects



Figure 5 Aerial view of the V&AW



Figure 7 Adrere Amellal at the Foot of the White Mountain– Siwa – Egypt



Figure 8 Cluster of suits at Adrere Amellal – Siwa – Egypt

IV. PROJECT DURATION

A. V&AW, Cape Town⁵

The project was constructed on six phases in 17 years

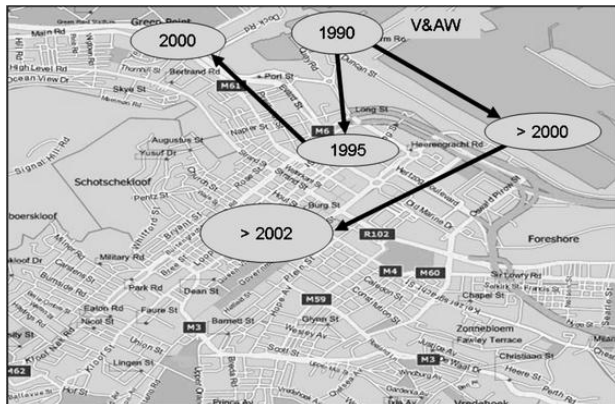


Figure 9 The development of V&AW and its adjacent areas

B. Siwa’s Sustainable Development Initiative

The project started in 1997, the complex has been receiving guests since 1999 and the main area deemed complete in 2000. In parallel with the working lodges, the work continued on the Siwa Women’s Artisanship Initiative, the visitor’s center and the reception building³.

V. TOTAL COST AND FUNDING

A. V&AW, Cape Town²

The financing of the project involved mixed investments by the Transnet Pension Funds and Transnet Ltd, as well as

private investments in the commercial and residential developments. The project has proven to be self-sufficient by virtue of all development capital being raised on a commercial basis.

The project costed 3000 million ZAR almost 217, 75 million \$ USD.

TABLE 1
SUMMARY OF EXPENDITURE OF THE V&W
SOURCE: VAN ZYL PS 2005

Project phase	Completion date	Budget (ZAR million)
1	Dec. 1990	65
2	Oct.1992	140
3	May 1997	528
4	Dec. 2000	95
5	Dec. 2002	312
V&AW Marina Residential sector one	Dec. 2004	282
6	Dec. 2006	570
V&AW Marina Residential sector two	March 2007	1008
Total		3000

B. Siwa’s Sustainable Development Initiative

All the funding is directly from the firm EQI. The total cost of the project without the land is EGP 5,901,606 (USD 1,686,173). The cost of the land is EGP 2,075,349 (USD 592,957)³

VI. COMPARATIVE ANALYSIS BETWEEN V&AW, CAPE TOWN, AND SIWA’S SUSTAINABLE DEVELOPMENT INITIATIVE

Pillars of Sustainability	V&AW, Cape Town	Siwa’s Sustainable Development Initiative
Economic	<p>The V&A Waterfront has consistently maintained growth of over 10% in contribution to nominal GDP since 2002².</p> <p>Total jobs created by the V&A Waterfront in the state grew by just under 60%².</p> <p>Total visitor numbers have increased to 24 million a year by 2014. Although the V&A Waterfront remains South Africa’s favorite tourist attraction for international tourists they account for only 26% of all visitors. Visits by locals grown to 58%, while 16% of visitors were from upcountry².</p> <p>The very success of the waterfront revealed tensions within the social and commercial fabric of Cape Town. It initially drew business away from the Central Business District and neighboring Green and Sea Point areas⁵.</p> <p>New development in the waterfront is aimed at the super rich, which is spatially set apart from both the city itself and ot her parts of the waterfront⁵.</p> <p>The fishing industry is under pressure due to the extent of the large business development⁵.</p>	<p>Nourish ecological tourism through reviving of Siwan cultural heritage⁴.</p> <p>New buildings were added to Siwa such as: first bank in Siwa, crafts store, library, cinema and a restaurant⁴.</p> <p>Encouraging small and micro-enterprises⁴.</p> <p>Adreere Amellal lodge hires 45 Siwans which presents 80% of the total employment of the lodge and 30 Siwans in Shali lodge with health care service and social insurance³.</p> <p>Adreere Amellal offers 85 Siwan families direct income opportunities in transportation, maintenance, construction and other related tourism jobs. Shali lodge offers jobs in artisanship and agriculture. Furthermore, job opportunities in traditional Siwan building techniques³.</p>
Environmental	<p>The re-establishment of physical links between Cape Town and its waterfront has created a quality environment: a desirable place to work, live, and play, and a preferred location to trade and invest for Capetonians and visitors, as well as giving Capetonians pride².</p> <p>Establishing of a committee responsible for applying sustainability principles and they has devoted a lot of money to support the cause.</p>	<p>Improve quality of life through generation strategy, energy conservation</p> <p>Raise environmental awareness among Siwans.</p> <p>Using traditional siwan building techniques and materials.</p> <p>Depending on natural ventilation and waste disposal.</p> <p>No electricity and any kind of electronic device.</p>

VII. COMPARATIVE ANALYSIS BETWEEN V&AW, CAPE TOWN, AND SIWA’S SUSTAINABLE DEVELOPMENT INITIATIVE:
(Continue)

Pillars of Sustainability	V&AW, Cape Town	Siwa’s Sustainable Development Initiative
Social	The V&A Waterfront struggles not to be a tourist trap where Capetonians and local consumers feel estranged. Recognizing the need to provide both the local and tourist markets, the V&AW believes that visitors will seek out the places preferred and frequented by locals ² . The success of the waterfront has revealed tension in the social fabric of Cape Town ² . The Capetonians tries their best to save their heritage and identity and not to be another Dubai. The Capetonians held different festivals around the year and tourists and visitors enjoy the atmosphere ⁵ .	Siwan women had been given the opportunity to gain employment. Enhance the locals’ living standards. Revival of Siwan cultural heritage. Siwans was trained, provided with the chance of owning their own business and to have the knowledge and the capability to run their businesses. Support health and agriculture.

VIII. CONCLUSION

Sustainable urban development strategies can take different forms and approaches depending on the target community characteristics. And to achieve that, it must be taken in consideration the three sustainability Pillars: environment, society and economy all in parallel.

After investigating the two case studies Cape Town and Siwa the research showed that each of them hasn’t achieved a full success in being a sustainable urban development project. The first, the V&AW, has achieved enormous economic and urban development but it resulted in a gap in the community and produced tension between the poor and the rich. The project is struggling to keep its heritage and identity. The local fishing industry went under pressure as a result of the large business development.

On the other hand, Siwa’s Sustainable Development Initiative has respected the nature of the environment and depended on natural resources of life, traditional building techniques and materials. But it hasn’t achieved much about the economy and employment numbers.

Any development must include all community members, respecting its nature and insure its economic impact to create livable communities. In addition, decision makers and regulators must support sustainable urban development strategies to ensure the man and society renaissance.

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