A Model for an Economic and Environmental sustainable City in Egypt

Experts Workshop

North Coast, 18th – 19th May 2014
Achieving Sustainable Urban Development Priorities
ASUD

Support Programme for UN-Habitat’s Medium Term Strategic Implementation Plan
EGYPT

Regional Office for Arab States

Dyfed Aubrey
Senior Human Settlements Officer
UN-HABITAT Regional Office for Arab States
Vision & Mission

Towards promoting and establishing sustainable urban development and securing adequate housing for all
United Nations Human Settlements Programme

A Model for an Economic and Environmental sustainable City in Egypt
United Nations Human Settlements Programme

Executive Director

Vice Executive Director

Public Administration

Offices correlation
Kuwait, Oman, New York, Geneva

Department of Global Division (Shelter, training, construction, assessment of urban planning and urban infrastructure)

Department of Monitoring and Research (Urban monitoring, analysis of the economic policies of urban, youth, gender)

Department of Technical Cooperation and Regional Regional Offices (Fukuoka, Japan / Cairo, Egypt / Rio, Brazil)

Programme Support Service

Department of Finance (Urban finance, water, sanitation, infrastructure)

A Model for an Economic and Environmental sustainable City in Egypt
A Model for an Economic and Environmental Sustainable City in Egypt

Sub-regions

**Maghreb:**
Algeria, Libya, Morocco, Tunisia

**Mashreq:**
Egypt, Iraq, Jordan, Lebanon, Palestine, Syria

**Gulf Cooperation Council (GCC):**
Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates

**Southern Tier countries:**
Sudan, Yemen

United Nations Human Settlements Programme
Focusing on the environmental component by developing safe cities with green areas.

Collaborating with governments, city councils and civil society organizations for the establishment of cities without slums, and provide reasonable living conditions for the poor.

Take the initiative to implement the Millennium Development Goals, which aim to improve the living conditions of slum dwellers, as well as post-disaster re-settlement.

A Model for an Economic and Environmental sustainable City in Egypt
Strategy

• Partnerships and ensure effective follow-up
• Inclusiveness in urban planning, management and governance
• Provide affordable housing
• The provision of infrastructure and services that are environmentally friendly in urban areas
• Promotion of finance systems for human settlements
United Nations Human Settlements Programme is currently working on:

- Bahrain
- Egypt
- Kuwait
- Iraq (Jordan)
- Palestinian territories
- Lebanon
- Sudan
- Somalia
- Libya
- Morocco

A Model for an Economic and Environmental sustainable City in Egypt
Key areas of work

• Planning and Urban Development
• Reconstruction and construction (schools, housing, infrastructure, water, sanitation)
• Institutional framework of institutions and planning organizations at the central and local level
• Urban management

The program works effectively in 10 Arab countries through 30 projects with a total value of about $ 100 million
United Nations Human Settlements Programme

Egypt Programme

1- Spatial Planning Urban Development; Environment & Climate Change Programme

2- Urban and Regional Polices, Governance, and Legislations Programme

3- Informal Settlements, Housing & Urban Regeneration Programme

Egypt Projects

- Urban Law Reform Assessment;
- Strategic National Development Support Project;
- Strategic Urban Plans for Small Cities in Egypt;
- Safe Cities for Women and Girls in Greater Cairo Region;
- Strategic Development Plan for Greater Cairo Region;
- Human Security through inclusive socio-economic Development in Upper Egypt
- **Achieving Sustainable Urban Development Priorities - ASUD**
ASUD Egypt

improved planning, implementation and monitoring practices for urban development in Egypt

city extensions

existing secondary cities

Ministry of Housing and Urban Communities (MoHUC)/
General Organisation for Physical Planning (GOPP)
Ministry of Local Development (MoLD), Sector Ministries, Local Authorities

Participatory and Inclusive Land Readjustment (PiLAR) & Community Contracting

Implemented Detailed Neighbourhood Plan

new cities

Ministry of Housing and Urban Communities/
New Urban Communities Authority (NUCA)

“Green Cities” & Local Economic Development (urban patterns for a green economy – leveraging density)

Strategic Urban Plan & Action Plan for Implementation

link to existing projects/ new pathways for future collaboration
Focus of ASUD Egypt

- Improve planning, implementation and monitoring practices for urban development in Egypt;
- Systematized knowledge for enhanced management of urban growth in Egypt;
- National and regional institutions in close partnership with local government better manage growth in Egypt.

Incorporation of themes/tools

- Green Cities – especially for the development of new settlements;
- Land Readjustment was mentioned as a means to look into preserving valuable agricultural land from being dwelled on;
- Amendment of urban legislation and the respective enforcement based on lessons learnt from implementation of projects;
ASUD Objectives

- Support GoE to possess professional and development methods and sources of information related to The development of New Urban Community Through new planning processes AND applying the GREEN planning methods.

- Support to progress the New City’s development document;
- Enhance the project performance to achieve strategic objectives;
- Obtaining Best practices and lessons learnt directly linked to the project policy goals;
- Capacity Building that serve professional management for similar mega and critical Project.
Thank You!

 شكراً جزيلاً
 نحو مستقبل حضري أفضل

UN-HABITAT
FOR A BETTER URBAN FUTURE
A Model for an Economic and Environmental sustainable City in Egypt

Experts Workshop

North Coast, 18th – 19th May 2014
Introduction

• A proposed development for Global New Urban Communities: Reflections from International Experience

• Professor David Shaw- University of Liverpool

  – Context
    • Chameleon nature of planning
    • New towns, urban extensions and the rhetoric and reality of sustainability- cases from around the world

  – New Towns and Garden Cities
    • 19th Century new towns and the Garden cities movement
    • Post war new towns and reflections on 50 years of experience
    • Re-emergence of the Garden cities debate

  – Some thoughts on potential guiding principles
Challenges and Opportunities of Comparative Planning

• Planning has a curious chameleon like quality whose colour depends ultimately on the particular social, political and cultural context in which it is found.
Temporality and Planning

• Immediate v Long term challenges?
• 50 year time horizon
• Political stability and consensus
• Public or private sector led
What type of new development is required?

- Where is the focus?
  - New Towns
  - Urban Extensions
  - Multifunctional
  - Polycentric development

- Sustainability
  - A marketing brand or reality
Focus on UK but similar experiences elsewhere

• Almere New Town, Netherlands
  – Long term phased development
  – State led
  – Land free
  – Infrastructure in anticipation of population
  – Not sure it would be replicable today
Early New Towns: Private Sector Led
Critical characteristics of the Garden City

Box 2

What makes a Garden City?

The Garden City idea was conceived by Ebenezer Howard, to combine the very best of town and country living and so create healthy homes for working people in vibrant communities. Garden Cities were the original ‘sustainable developments’. The Garden City principles include:

- Strong vision, leadership and community engagement.
- Land value capture for the benefit of the community (see Box 3).
- Community ownership of land and long-term stewardship of assets.
- Mixed-tenure homes and housing types that are affordable for ordinary people.
- Beautifully and imaginatively designed homes with gardens in healthy communities.
- A good range of local jobs in the Garden City itself and within easy commuting distance of homes.
- Opportunities for residents to grow their own food, including allotments.
- Generous green space, including a surrounding belt of countryside to prevent sprawl, well connected and biodiversity-rich public parks, high-quality gardens, tree-lined streets, and open spaces.
- Strong local cultural, recreational and shopping facilities in walkable neighbourhoods.
- Integrated and accessible transport systems.
New Towns in Action

Function and Purpose

• New post war reconstruction

• Decentralisation of overcrowded urban areas

• 1946 New Towns Act

• State led through New Town Development Corporations 1946-1970

• Expanding towns but with a different planning function

Location

This map shows, in bold, the New Towns in Britain and Northern Ireland created or expanded by New Town Development Corporations. Also shown, in italics, are some of the towns that experienced large expansion around the same period as a result of the 1952 to 1960 Expanded Towns Programme. Other major urban areas, some conurbations, etc., are also shown.
New Towns Legacy

Some Basic Facts

• 32 New towns designated between 1946 (Stevenage) and 1970 (Central Lancs)

• Many built on existing settlements (Milton Keynes 40,000 rising to 184,000 in 2007)

• 87,000 hectares gifted to Development Corporations

• 2001 about 6000 hectares undeveloped worth £914 mill

BUT NOT ALL WERE/ARE SUCCESSFUL
New Towns Near Liverpool

Success and failure

• Skelmesdale
  – 1961 original pop 10,000, planned 73,000, 36,000 by 2007

• Warrington
  – 1968 122,000, planned 160,000, 2007 193,000

• Runcorn
  – 1964, 28,000, planned 73,000, 2007 61,000
The return of the new settlement debate

The scale of the housing crisis

- Population projections suggest 5.8 million new households by 2033
- 232,000 new houses per annum.
- Where will they all go?
Labours Approach to the Housing Crisis (1997-2010)

- Targets 240,000 per annum 2 million 2016 3 mill 2020
- 60% on brown field sites
- 29 new growth points – primarily in the south, but now extended to the north
- New eco-towns 5-20,000 new homes
Town and Country Planning Association—advocates for new towns

Advocacy

• Re-imaging Garden cities for the 21st century (July 2011)

• Creating Garden Cities and Suburbs Today: Policies Practices, Partnership Model Approaches (May 2012)

• Creating Garden Cities and Suburbs Today- A Guide for Councils (March 2013)

• New Towns Act 2015 (February 2015)

Political Party Buy-in

• All three political parties commit to New Towns

• March 2014 Osborne announces Ebbsfleet – North Kent as a new town

• April 2014 bidding opened for ‘Locally-led Garden Cities’ – (closing date 29th August 2014)
Coalition’s Approach to Housing (2010-2014)

Localism

But

• Garden City or garden suburb
• Community or private housing led
• Appropriate scale or simply ‘greenwashing’
1. Changing role of the state
   • Planning is an inherently political process with important technical aspects
   • Role function and purpose of the state is changing
   • What is the public interest?

2. Partnership working and trust is key
   • New settlements require long term vision and commitment of 30-50 years
   • Are we patient enough?
   • Public led or private led or an arms length agency which has powers but semi-independent
Reflections Continued

3 Scale of planning is important

- Regional
  - To what extent is the new settlement functionally dependent

- City Scale
  - To what extent is the settlement as a whole planned and can critical infrastructures be provided in anticipation of population growth

- Neighbourhood
  - How do the individual blocks fit together

4. Who captures the uplift in land value?

- How are ‘public’ facilities delivered and maintained (including the aspiration for balanced mixed development)

- Can demand management principles be built into the design processes and at what cost
• Context is important
• Insights can be learnt from international experience
• Similar global challenges abound
• But specific solutions need to be adapted to specific circumstances…….
Thank You !!!!

- Professor David Shaw
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- University of Liverpool
- daveshaw@liv.ac.uk
Economical And Environmental Sustainable City Model Egypt

Expert Workshop

North Coast
18- 19 May 2014

General Organization For Physical Planning
New Urban Communities Authority
Ministry of Housing, Utilities and Urban Development
RE-THINKING NEW CITIES IN EGYPT

DR. SAHAR ATTIA
Professor of Urban design & Urban Planning
Faculty of Engineering – Department of Architecture
Cairo University
Outline

Introduction : raising questions.
1- Background/ flash back
2- New Cities in Egypt : The current outcome
3- The gaps/ issues
4- The misperception about who designs cities?
5- The shift - raison d’etre
1- What is The kind of city El Alamein wants to be or to become?

2- Do we have a model?

3- What can be the *raison d'être* of a Sustainable city?

4- Can we do a shift?

We need to be digging deeper into understanding how cities actually can be designed and built.

S.Attia, 2014
Development Corridors

- Focus on De-concentration of GCR
- Focus on development corridors - Missing related transportation projects

Localized vision

What will happen else where ??
Pattern Of Population Movement
Concept Evolution Of New Cities In Egypt

### 3 GENERATIONS OF CITIES (22 CITIES)

<table>
<thead>
<tr>
<th>1977-1982 1&lt;sup&gt;st&lt;/sup&gt; Generation</th>
<th>1982-2000 2&lt;sup&gt;nd&lt;/sup&gt; Generation</th>
<th>2000 - present 3&lt;sup&gt;rd&lt;/sup&gt; Generation</th>
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</thead>
<tbody>
<tr>
<td>7 Cities</td>
<td>8 Cities</td>
<td>7 Cities</td>
</tr>
<tr>
<td><strong>10&lt;sup&gt;th&lt;/sup&gt; of Ramadan</strong></td>
<td><strong>New Cairo</strong></td>
<td><strong>New Assiout</strong></td>
</tr>
<tr>
<td><strong>6&lt;sup&gt;th&lt;/sup&gt; of October</strong></td>
<td><strong>Sheikh Zayed</strong></td>
<td><strong>New Aswan</strong></td>
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<tr>
<td><strong>Borg El Arab</strong></td>
<td><strong>Badr</strong></td>
<td><strong>New Kena</strong></td>
</tr>
<tr>
<td><strong>15&lt;sup&gt;th&lt;/sup&gt; of May</strong></td>
<td><strong>El Shorouk</strong></td>
<td><strong>New Tiba</strong></td>
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<tr>
<td><strong>Sadat</strong></td>
<td><strong>El Obour</strong></td>
<td><strong>New Sohad</strong></td>
</tr>
<tr>
<td><strong>New Salheya</strong></td>
<td><strong>New Nobareya</strong></td>
<td><strong>New Fayoum</strong></td>
</tr>
<tr>
<td>New Damietta</td>
<td>New Beni soueif</td>
<td>New Ekhmim</td>
</tr>
<tr>
<td>+</td>
<td>New Menia</td>
<td>+</td>
</tr>
<tr>
<td>The Touristic Cities On The Mediterranean</td>
<td>+ Suez Area</td>
<td>The Touristic Cities On The Mediterranean</td>
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</tbody>
</table>

Source: NUCA 2012

S.Attia, 2014
Concept Evolution Of New Cities In Egypt

CURRENT CONCERNS

From 2000
2 Cities

Tochka
El Owainat Eastern City

From 2010
3 Cities

New Luxor
Port-said Eastern City

El Alamein

Source: NUCA 2012
New regions map ??
Bottom up or top down approach??

1st Generation cities (8)

2nd Generation cities (9)

3rd Generation Cities (7)

Proposed Cities Plan (2017)

Source: NUCA 2012
3- New Cities in Egypt: The current outcome

Population

Target: 17,000
2012: 6,000
1996: 559

Source: NUCA 2012
New Cities in Egypt: The current outcome

Forces driving growth
Relation to initial plan

6 October

Population Growth

<table>
<thead>
<tr>
<th>1st GENERATION</th>
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<tbody>
<tr>
<td><strong>No. of Population</strong></td>
</tr>
<tr>
<td>New Salheya</td>
</tr>
<tr>
<td>Now</td>
</tr>
<tr>
<td>Expected</td>
</tr>
</tbody>
</table>

S. Attia, 2014
2- New Cities in Egypt: The current outcome

6 October

S. Attia, 2014
2- New Cities in Egypt: The current outcome

- Total Area: 921k Feddans
  - Master Plans: 150K Feddans
    - Extensions: 223k Fed
    - Planning: 125K
    - Ongoing: 128K
    - Enduring: 108K
  - Built: 771 K Feddans
    - Green Belts: 123K Fed
    - Urban Mass: 363K

S. Attia, 2014
Population growth rate

**2nd Generation**

<table>
<thead>
<tr>
<th>Location</th>
<th>Now</th>
<th>Expected</th>
</tr>
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<tbody>
<tr>
<td>New Menia</td>
<td>40000</td>
<td>157000</td>
</tr>
<tr>
<td>New Nobareya</td>
<td>22000</td>
<td>80000</td>
</tr>
<tr>
<td>New Bensoueif</td>
<td>54000</td>
<td>268000</td>
</tr>
<tr>
<td>Badr</td>
<td>100000</td>
<td>450000</td>
</tr>
<tr>
<td>El Sheikh Zayed</td>
<td>159000</td>
<td>675000</td>
</tr>
<tr>
<td>New Cairo</td>
<td>102000</td>
<td>600000</td>
</tr>
<tr>
<td>El Shorouk</td>
<td>155000</td>
<td>500000</td>
</tr>
<tr>
<td>El Obour</td>
<td>300000</td>
<td>600000</td>
</tr>
</tbody>
</table>

**3rd Generation**

<table>
<thead>
<tr>
<th>Location</th>
<th>Now</th>
<th>Expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Fayoum</td>
<td>0</td>
<td>130000</td>
</tr>
<tr>
<td>New Kena</td>
<td>0</td>
<td>130000</td>
</tr>
<tr>
<td>New Aswan</td>
<td>0</td>
<td>70000</td>
</tr>
<tr>
<td>New Sohag</td>
<td>0</td>
<td>81000</td>
</tr>
<tr>
<td>New Tiba</td>
<td>15000</td>
<td>195000</td>
</tr>
<tr>
<td>New Assiout</td>
<td>17000</td>
<td>200000</td>
</tr>
</tbody>
</table>
3- Issues/Gaps

1. Lack of coordination between urban, services and industrial development.

2. No Clear division of roles and responsibilities within and between the relevant institutions.

3. Building regulations contributes in weakening the visual image of the city. And their development

1. Lack of basic services in many neighborhoods.

1. Adequate and relevant training programs for internal capacity building.
3- Issues/Gaps

Missing

Sustainability

Connectivity

Good Governance

Specific value proposition for each city

Population Density distribution – Urban Sprawl

Quality of life

- An integrated development planned city with deep understanding of sustainability, competitive cost of living, environmental aspects and attractiveness

- An efficient and well connected integrated multi modal public transport system. Good regional connectivity through high capacity roads

- World class infrastructure to meet the demands of growing industrial and residential demands

- A specific set of value propositions for the city for investors and residents, cities are missing the regional role

- Densities are to be revisited, and adapted to the cultural, and patterns of Egyptian life style
4- The misperception about who designs cities?

- Sustainability is a big theme, it is not only about planning it is a lifestyle, people still want to live a life of consumption.

- Is planning the conventional way the problem? Or is it the understanding of the conventional practice and how to fit in the sustainable design?

- We must be sensitive to cultures, and work as experts in examining the forces that shape cities in each region, and choose the adequate model.
Sustainable Design

Impact cycle

Land Use
- Activity Location

Transport
- Passenger Travel
- Transport Infrastructure

Land Use/Transport system

Policy

Sustainability Initials
- Economy
  - Level of economic growth
  - Economic Related activity
- Social
  - Socio-demographic Characteristics
  - Travel needs Preference/attitudes
- Ecology
  - Natural Resources
  - Environment spatial quality

Feedback

Sustainability Impact
- Economy
  - Level of economic growth, Consumer welfare
- Social
  - Equity, Opportunities, Health
- Ecology
  - Emission, noise

Mobility, Accessibility

Internal Impact

External Impact
5- The Shift

Development planning strategies includes essential plans for the industrial sector, the service sector, Urban Development, empowerment strategies and implementation.

Vision, mission and goals and target

Industrial Zone development
Developing the service zone
Developing the urban section

Empowerment strategies
Public Transportation
Infrastructure
Utilities
Environmental control

Implementated strategies
Spatial uses distribution
Institutional development
Planning and control
finance

S.Attia, 2014
Vision, Mission, and Target

National development objectives

City development objectives

Key elements of the new city vision

- **Balance** – across various sectors’ development
- **Sustainability** – of the city’s development
- **Inclusivity** – with regards to various social and economic segments
- **Attractiveness** – of the city
- **Quality** – of life for its residents
- **Adequacy** – of services, infrastructure, utilities and other civic amenities

What new cities did right??
5- The Shift

Where we go from here ??

Set the principles that should guide design of future city, and include in the process

PARTNERSHIPS
STRATEGIC ACTION
Thank you
خريطة رقم (3/2)
توزيع المحاصيل بالأراضي الزراعية المقترحة
الآراضي الصالحة للتنمية في مصر (وفقاً للمخاطر)

منطقة صعبة تنميتها (قم جبلية / بحر الرمال / غرو رملية / مناطق فوالق وصدوع)

الخصائص الطبيعية المؤثرة على صلاحية الأراضي

- مركز الزلازل
- خطورة شديدة
- خطورة متوسطة
- مناطق شديدة النشاط بالزلازل
- مناطق متوسطة النشاط بالزلازل
- كتائب الرملية وطنية
- سيفات
- الرمال والكتائب الرملية

نطاقات الفوالق

- قلق كلاسيكي
- نطاق الصدوع الشمالية والجنوبية
- نطاق صدوع البحر الأحمر - الليبية
- نطاق صدوع البحر الأحمر - خليج السويس والعقبة
- نطاق صدوع البحر المتوسط
- مكرات السويس والأوروبية الرئيسيه
- نطاق تأثير البيئات الحيوانية

منطقة معرضة لارتفاع مستويات مياه البحر

الطبقغرافيا

- 100 - 125
- 125 - 150
- 150 - 175
- 175 - 200
- 200 - 225
- 225 - 250
- 250 - 275
- 275 - 300
- 300 - 325
- 325 - 350
- 350 - 375
- 375 - 400
- 400 - 425
- 425 - 450
خريطة رقم (3/7)
خريطة تجميعية للأراضي الصالحة للتنمية في مصر

% المساحة المأهولة
6%

الاراضي الصالحة وفقًا للموارد بدون محددات
43%

الاراضي الصالحة وفقًا للموارد والحدود المحددة
16%

40% من مساحة مصر يمكن تنميتها في المنظور القريب.
الموانئ والثروات وأماكن تواجدها
النظام التنموي للجبهة الشمالية الغربية
- 21% من جملة مساحة مصر
- تستهدف تحقيق التعاون الدولي مع أوروبا.

النظام التنموي للجبهة الجنوبية
- 58.8% من مساحة مصر
- يستهدف تحقيق التعاون مع دول العمق الإفريقي.

النظام التنموي للجبهة الشرقية
- 19.1% من مساحة مصر
- يستهدف تحقيق التعاون الدولي مع دول المحيط الهادئ وآسيا.
خريطة رقم (10/3)
تعظيم موقع مصر الجغرافي إقليمياً ودولياً
خرطة رقم (12/3)
المناطق الصالحة للتنمية
خريطة رقم (14/3)
تحديد نطاقات الأقاليم التنموية

مناطق التنمية
الجمعات العمرانية
أراضى الأنشطة الاقتصادية
شبكة الطرق والمحاور
العرضية والطولية
مناطق التنمية ذات الأولوية
والمشاريع القومية
التقسيم الإقليمي المقترح
خريطة رقم (20/3) مصر اليوم 2013
خرائطة رقم (21/3) مصر بعد 40 عام
خريطة رقم (22/3) مصر في القرن 22
A Model for an Economic and Environmental sustainable City in Egypt

Experts Workshop

North Coast, 18th – 19th May 2014
Al Alamein Development New Approach
Issues/ Opportunities

Presented by: Dr. Maher Stino
Outline

• Objectives
  الأهداف

• Givens
  المعطيات

• Vision
  الرؤية

• Issues & Opportunities
  التحديات والفرص
  – Site and Context
    الموقع العام
  – Sustainability
    الإستدامة
  – Livability
  – Targeted Population & Economic Base/ Investors
    السكان والمستثمرين المستهدفين

• Innovative Planning Approach
  نهج التخطيط الغير تقليدي
الأهداف

• تهدف الإدارة إلى إقامة مجتمعات عمرانية جديدة مبنية على أسس التنمية المستدامة / sustainable community

• إنشاء مدينة متوافقة بيئياً توفر مستويات مرتفعة من جودة حياة وتطبق أفضل الممارسات البيئية وخاصة عند الإمداد بمرافق البنية الأساسية:

- استخدام مصادر جديدة ومتجددة للطاقة
- استخدام تكنولوجيا تحلية المياه وإعادة الاستخدام
- توفير قدر مناسب من المناطق مفتوحة وخضراء
- إعادة تدوير المخلفات الصلبة
- خلق بيئة عمرانية متطورة
- إنشاء منطقة صناعية صديقة للبيئة
Site & Context

- **Site & Context**

- **Site & Context**

  - **Area of the site:** 88353 acres
  - **Road Network:**
    - Route of the scientific wadis
    - Route of Iskander City-Mersa Matrouh coastal route

  - **Areas that received cooperation from international cooperation:

  - **Protection of the Governor**
Vision
Vision

رؤية
Vision
Issues/ Opportunities

Site and Context

Inland site versus waterfront sites

• What would attract people and investors to this site?

موقع المدينة كموقع غير مطل على البحر

• موقع المدينة كموقع غير مطل على البحر

What would attract people and investors to this site?
Landmines & site clearance: sequence, shape & implication on phasing development

- المراحل تطهير المناطق الألغام
- تسلسل وشكل مراحل التنمية وتأثيرها

Issues/Opportunities

Site and Context
Issues/ Opportunities
Site and Context

Agriculture Belt

الموقع العام

الحزام الزراعي

- مخاوف من نمو مناطق عشوائية
Alameed conservation within the city boundaries

- Area: 705 km²
- Extends from the seafront at 70 km on the eastern route via Mansoura - 30 km west - 23.5 km from the beach.

- Alameed Reserve within the city boundaries

**Issues/Opportunities**

**Site and Context**

- The area is located between the seafront and 70 km on the eastern route via Mansoura. It stretches 30 km west and 23.5 km from the beach.

- The reserve is located within the city boundaries.
Issues/ Opportunities

Sustainability

• In the next 25 years, we will face serious shortages:
  – Shortage in electricity
  – Shortage in the drinking water
  – Shortage in the irrigation water
  – Shortage in gas/ natural gas
Can the new city generate its own electricity?

- A solar field of 1000 acres can provide an electricity of 100 MV; enough for feeding 10,000 residential units.
Can the new city produce its own potable water?

• الاهتمام بإمكانيات الطاقة المتجددة
  - تحلية مياه البحر
  - عدد السكان المقترح في الفدان = 50,000 نسمة
  - متوسط نصيب الفرد من موارد المياه = 200 متر مكعب/يوم
  - توفير مياه شرب = 10,000 متر مكعب/يوم

• التحديات
  - منطقة الشرق الأوسط وشمال أفريقيا هي أكثر مناطق العالم شحة في المياه.
  - ارتفاع متزايد في عدد السكان.
  - تناقص متوسط نصيب الفرد من موارد المياه المتجددة بنسبة تتجاوز 75% بحلول عام 2030، سيعيق نقص المياه المتوفرة عائداً أمام التنمية الصحية والاجتماعية والاقتصادية.

[Image of water treatment diagram]
A city of 1,000,000 inhabitants can produce Treated Sewage Effluent (T.S.E) irrigation water for 10,000 acres.

- تدوير مياه الصرف المُعالجَة بنسبة 100% لاستعمالها في ري الحدائق
- تحقيق خفض بنسبة 60% في استهلاك المياه لكل متر مربع مقارنة بالاستهلاك المعتاد
- استخدام النباتات والأشجار المحلية قليلة الاستهلاك للمياه
Can the new city recycle its own solid wastes

- Strategic Management of Solid Wastes
- Can the new city recycle its own solid wastes
- The importance of having the necessary equipment for the production of clean energy
- The challenges of managing and processing the solid waste, converting it into manure, and recovering the energy from it

- It represents a collection and processing operation, converting the increased amounts of waste into solid waste management on a daily basis for the municipalities and cities
- The conversion is done under control and through a method of burning the solid waste, which is the main environmental issue
- This challenge is facing this task with plans and recommendations
- This work will be implemented through training and projects and recommendations for this field in cooperation with all concerned parties
Can the new city produce Biogas

- Designed biogas unit
- Average daily production of biogas: 18.81 m³
- Energy that can be generated from biogas
- 66.3% methane content of the biogas

Issues/Opportunities
Sustainability

Biogas plant

UN-HABITAT
Issues/ Opportunities

Livability

Affordable Housing
Issues/ Opportunities

Livability

Mass Transmit
Livability

Walkable Urban Environment

- A walkable and accessible environment encourages walking and the use of self-propelled transport, enabling easy access to many locations in the city.

- The construction of many sidewalks and wide, well-vegetated streets in all parts of the city.

- Creating the largest possible number of pedestrian and bicycle routes in all parts of the city.
Issues/ Opportunities

Livability

Attractive Urban Character
Issues/ Opportunities
Targeted Population & Economic Base/Investors

Which mix of socio-economic groups?

Targeted Economic Base/Investors:

- Green industry
- Services
- Recreation
- Tourism
Innovative Planning Approach

- Stakeholders
  - Targeted Investors/ Economic Base
  - Targeted Population
- Specialized Experts (Innovative Solutions)
- Issues/ Opportunities
- Needs
- Plan Evolution
  - An iterative process
  - Testing/ refining
- Green Sustainable New Community

• نهج التخطيط الغير تقليدي
• المنهجية

- Plan Evolution
- Specialized Experts (Innovative Solutions)
- Issues/ Opportunities
- Needs
- Stakeholders
  - Targeted Investors/ Economic Base
  - Targeted Population

UN-HABITAT
Innovative Planning Approach

Build a small nucleous development within the next 3 years

- Street of dreams
- Green community
A Model for an Economic and Environmental sustainable City in Egypt

Experts Workshop

North Coast, 18th – 19th May 2014
A Model for an Economic and Environmental Sustainable City in Egypt

Working Group One
Sustainability Consideration in the application of NUC models
Hussein Abaza
Sustainable Planning & Design

Environment

Social & cultural

Economic
Cultural & Social Dimension

- Involvement of beneficiaries
- Empowerment, build trust
- Integration of marginalized communities
- Reflects cultural values and traditions
- Inter & intra generational equity
- Quality of life
- Social cohesion
- Access to health, education & sanitation
- Creates jobs (decent)
- Poverty reduction
Maintains resilience of the ecosystem

Respects/conserves natural environment

Resource efficiency (Energy, water)

Renewable Energy

Use of recyclable and eco friendly building material

CO₂ emissions reduction

Waste reduction, recycling, reuse

Waste separation & composting

Reuse of water

Sustainable building practices and design
Economic Dimension

- Support to economic activities & enhanced competitiveness
- Efficiency in use of factor inputs & increased output/unit of input
- Reduced waste, CO₂ emissions, sound pollution
- Maximizing use of local material/renewable material
- Affordability and Accessibility
- Economic viability/return on capital (initial/operational cost/externalities..)
- Diversification & revitalization of the economy
- Contribution to GDP
- Number of new jobs created/health impacts
Sustainability Assessment Tools

- Integrated sustainability assessment that integrates environmental & social externalities

- Full Life Cycle Assessment

- Resource efficiency projections/modeling

- System dynamics analysis that takes full consideration of the interlinkages & dynamics between physical, social/cultural, environmental & economic aspects

- Cost benefit analysis that goes beyond the narrowly focused short-term economic & financial aspects incorporating as well the social & environmental considerations