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SUSTAINABLE URBANIZATION AND URBAN DEVELOPMENT; GUIDELINES FOR DEVELOPING COUNTRIES

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ABSTRACT;

During The last three decades, development processes of societies and countries are usually accompanying by series of changes that aiming to raising the community's nature, economic and social environment. Associating with those processes many of environment hazards and negative impacts are resulting, so it is necessary to taking other directions of development to enhancing the quality of life without negatively effecting on local and global nature, economic and social environment. Sustainable development is one of those other directions of development which appearing to enhancing the living conditions of the current generations without resulting negative impacts to future generations, nature sources and the surrounding economic and social environment. In this line, sustainable urban development should not be viewed separately from sustainable urbanization. In these terms, sustainable urbanization implies growth and harmonic development with the environment where services and habitat conditions can provide the inhabitants with optimum living conditions, and where pollution and destruction of water, soil, air, flora and fauna are minimal.

Keywords: Sustainable Urban Development; Environmental Pollution; Developing Countries.

1. INTRODUCTION

Most of the Egyptian cities are confronted in the new Millennium with problem of accommodating the apparently rapid growing populations in cities and providing them with tenure, infrastructure and shelter while ensuring sustainability as well as enhancing economic growth. However, awareness about sustainable development is growing around the globe for last few decades. The UN Summit on Environment and Development in 1972, 'Agenda 21', the closing document of the UN 'Earth Summit' in 1992 in Rio de Janerio, followed by many other international and national meetings and conferences show the growing concerned for protecting the environment for the future generations by introducing sustainable development concept, (Parkin,S. 2000).

According to Chaharbaghi, there exists a society in which people everywhere live in peace and security, breathe fresh air, drink clean water and eat uncontaminated food. They have livelihoods that allow them to enjoy life, raising healthy, contented and educated children. They leave behind them a stock of wealth comprising man- made and environmental assets for the next generation, no less than they inherited from the previous generation. The real world, however, is far from this ideal. There is a growing concern about the long-term future, the resources of the planet, the environment and high levels of poverty, which are linked with the spread of disease, social unrest, population growth and environmental degradation. Sustainable development has come to prominence, neither as a sudden fad nor a silly fashion, but rather to bridge the gap between the ideal and real worlds, (Chaharbaghi, 1999). However, this paper will be started with discussing the concept and Challenges facing sustainable urbanization and analysis the themes and different approaches for sustainable land development for developing countries, finally discussing the Egyptian case study for sustainable development.

2. SUSTAINABLE URBANIZATION & DEVELOPMENT: THE CONCEPT

Urbanization is the process of transformation that affects geographic regions when they become more urban. During the urbanization process, a growing share of a region's land and people become included in cities, suburbs and towns. At the same time, the share of land and population in rural areas declines. Urbanization affects the physical shape of a region as well as the social experience of those who live there. Physical urban growth alters the natural and built landscape while population growth reshapes politics and culture. The ways in which urbanization transforms a region depends on the nature of what occurs. Socially, urbanization may increase the richness and diversity of a region's population or cause tension and conflict between competing groups. Physically, urbanization may produce new urban spaces and livable neighborhoods or destroy critical environmental features and important cultural resources. Sustainable urbanization occurs when the urbanization process harmonizes with principles of sustainable development. It is sustainable development's urban embodiment and provides an urban manifestation of its fundamental ideas. Sustainability needs to be understood in an integrated and holistic view.

These investments should allow the development of re-distributive economies directed not only at the building up of an equitable society without exclusion, but also at the preservation of the cultural and natural patrimony. In these terms, sustainable urbanization implies growth and harmonic development with the environment where services and habitat conditions can provide the inhabitants with optimum living conditions with equal opportunities for men and women, and where pollution and destruction of water, soil, air, flora and fauna are minimal. As part of this urbanization process, actions towards sustainable construction are required such as the generation and utilization of clean techniques and technologies for construction, and making use of existing local resources in order to cause the minimum negative impact to the environment. This implies:

- Minimum use of non-renewable natural resources and promotion of substitutes;
- Rationed use of renewable natural resources;
- Minimum production of waste and pollutants that nature cannot recycle on its own;
- Provision of appropriate spaces and quality of life required for human development.

2.1. Definitions;

What can we use as a working definition of sustainable urban development? Certainly, one feature that the literature on sustainable development confirms is that there is a diversity of viewpoints on what constitute the key issues. Serageldin (1993) draws our attention to the conflict between ecologists, economists and sociologists, highlighting particularly the limited vision of economists in interpreting sustainable development. However, it is clear that not only economists but many other observers fall into the trap outlined by Brooks (1990) of confusing 'sustainable' with 'sustained' development (Cernea, 1993; Rees, 1993). Where does this leave us in our attempts to flesh out what is meant by sustainable urban development? Clearly, such a concept is going to have a macro-dimension in that it should encompass a philosophical approach to policy and management issues, although in some instances this philosophical and emotional approach is perhaps over dominant (Girardet, 1992), but it also needs to have a micro dimension in that it should identify the major components of what might constitute a comprehensive and integrative program of sustainable urban development for the 1990s and beyond.

At the macro-level, developing sustainability in an urban context must satisfy the following requirements:

- Equity, social justice and human rights;
- Basic human needs; Social and ethnic self-determination;
- Environmental awareness and integrity;
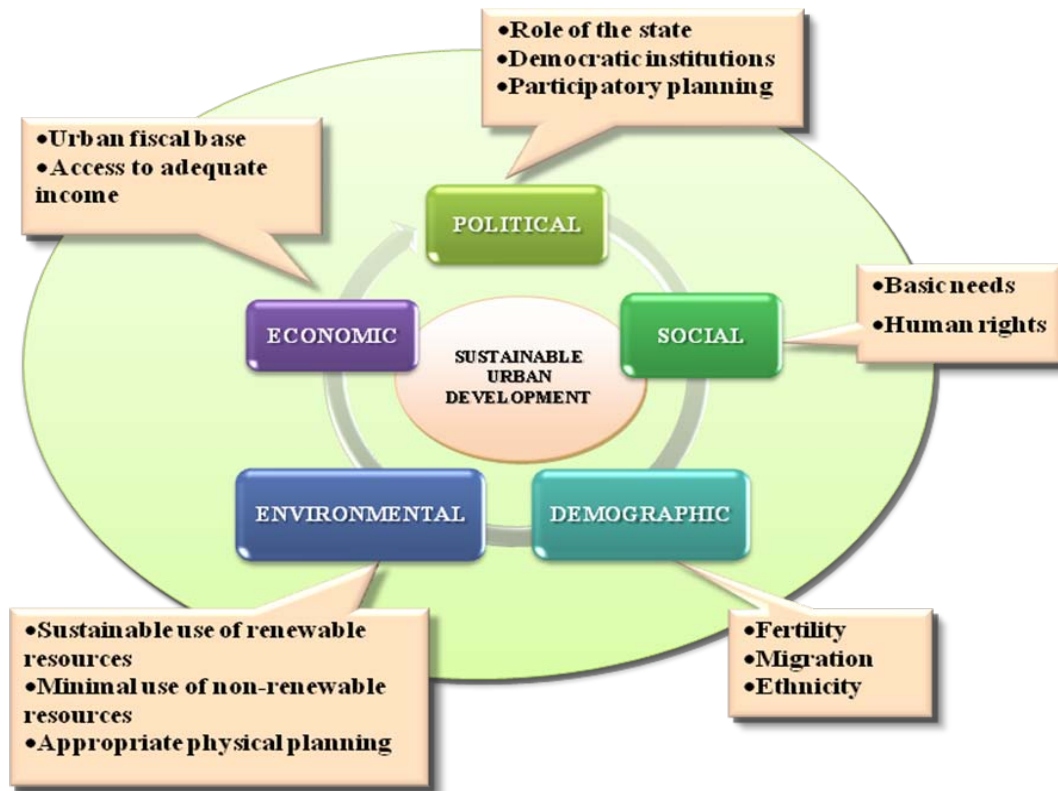- Awareness of inter-linkages across both space and time.

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Fig1. The components of sustainable urban development

Policies which aim at sustainable urban development can and should contribute to any urban management strategy irrespective of the economic situation. At the micro-level, therefore, there are identifiable areas of concern at which attention should be directed, but in as integrative manner as possible, since all of these areas of concern are clearly interconnected.

- First, there are **economic activities, employment and poverty**. Such matters need to integrate the external role of the city in regional and national economies (urban productivity) with the returns to labor within this productive environment. The role of the informal or petty commodity sector is clearly important in this context, although not to the extent that it is seen as a way of replacing the role of the state with self-help. The related concern with poverty is, of course, of fundamental importance since it underpins the ability of the urban household to achieve its own form of sustainable development and in turn imposes on the sustainability of the urban situation as a whole (Schwarz, 1993).

- A second area of concern revolves around the **physical urban environment itself**, the so-called 'brown agenda' (World Bank, 1993 b). Here it is important to distinguish between those elements which are city-wide and constitute primarily the responsibility of the state, such as energy and water provision, and those where the individual or household can be involved, for example in waste 'disposal' through recycling. By and large, in this context, most cities are struggling to cope with the detrimental consequences of rapid growth. Very few are in the fortunate position of Singapore, for example, in being able to consider and debate the nature of urban parkland provision (Ooi, 1994).

- The third area of concern is the **urban-social environment** considered as basic needs provision. Basic needs can encompass a very wide range of concerns, from shelter to food to education and health care. Once again, the state clearly has a role to play in meeting expensive or large- scale needs, such as the construction and staffing of schools or hospitals. Another related area which remains inadequately discussed in the urban context, and yet which remains vital to achieving the macro-goals of sustainable urban development is that of human rights. Although basic social and physical needs should be indivisible, such complementarily does not always or often occur (Vincent, 1986). The failures and limitations of democracy in many developing countries have, of course, led to a substantial debate on the role of urban social movements in helping to improve the access of urban residents (not necessarily the poor) to limited social and physical resources. The relationship between urban social movements and sustainable urban development has, however, not been explored as yet.

All of these areas of concern must be set against the backdrop of their demographic situation. It is axiomatic that cities are growing more rapidly than overall populations, but the nature of that growth needs to be carefully assessed and incorporated into the program me of development. There are those, such as White and Whitney (1992) who argue that 60 per cent of all urban growth can be attributed to natural growth. But this situation is quite different across the Third World, particularly when placed within the spectrum of national incomes. In poor countries with large rural populations the devastating cause of urban population growth is migration. Moreover, it is not just domestic rural-to-urban migration that is the cause of the problem. People, including the poor, are becoming increasingly mobile on an international scale as modes of communication and transport improve and, more importantly, become cheaper. Within the context of industrializing south-east Asia, for example, the most sizeable international labor group is the unskilled, moving not only from Indonesia, Thailand and India into Singapore as construction or domestic workers, but also from Thailand and Indonesia into Malaysia, and from Myanmar and Cambodia into Thailand. (Hettne, 1993; Brown, 1994).

2.2. Is Sustainable Urban Development a Useful Concept?

Some environmentalists argue that if sustainable urban development is necessary, it therefore must be possible. Perhaps so, but if you are stranded at the bottom of a deep well, a ladder may be impossible even though necessary. The more practical question is whether sustainability is a useful concept for planners. The answer here is mixed. The goal may be too far away and holistic to be operational: that is, it may not easily break down into concrete, short-term steps. We also might be able to define sustainability yet unable to ever actually measure it or even know, one day in the future, which we had, achieved it. An old eastern proverb identifies the western confusion of believing that to name something is to know it. That may be the danger in automatically embracing sustainable development: a facile confidence that by adding the term "sustainable" to all our existing planning documents and tools (sustainable zoning, sustainable economic development, and sustainable transportation planning), we are doing sustainable planning. Conversely, one can do much beneficial environmental work without ever requiring attention to the concept of sustainability.

Yet sustainability can be a helpful concept in that it posits the long-term planning goal of a social-environmental system in balance. It is a unifying concept, enormously appealing to the imagination that brings together many different environmental concerns under one overarching value. It defines a set of social priorities and articulates how society values the economy, the environment, and equity (Paehlke 1994). In theory, it allows us not only to calculate whether we have attained sustainability, but also to determine how far away we are (actual measurement, though, is another, harder task). Clearly it can be argued that, though initially flawed and vague, the concept can be transformed and refined to be of use to planners.

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2.3. Issues and Challenges facing Sustainable Urbanism

In most of the developing countries cities, the actions taken in this respect are few. Most of the initiatives have come from the private sector, mainly from universities and NGOs interested in the topic. Nevertheless and in order to place the necessary importance to the topic the main issues and challenges presently faced are listed below.

2.3.1. Making Sustainability a Priority;

Sustainability is a concept that has been recently introduced within the urban development framework in third world countries. Since the Rio Summit and through various conferences and international gatherings, its advocates are trying to convince governments and other stakeholders that a balance between development and the use of natural resources is important for the preservation of the environment and the construction of healthy cities. The results of urban development in third world countries show that sustainable construction and sustainable development are not yet a priority. This is a concept managed by professionals in certain fields and only recently have governments begun to pay attention to it, due more to international pressure than to internal conviction. Nevertheless, there are a series of warnings that indicate the need to change the way in which development is presently undertaken and some governments and NGOs have started to take action so that more sustainable practices are encouraged. Cities have started to show the negative implications of the lack of balance between social, economic and environmental development. The building sector is a great consumer of resources. Amongst others, the production of bricks and the lineal expansion of cities are using up the land needed for agriculture. Application of corrective measures is needed in order to stop or adjust practices that are no longer sustainable.

The rational use of these resources is very important to the creation of cities where nature and people can live in harmony. Increased involvement by governments and professionals is needed if the application of such concepts is desired. The circle of discussion and dissemination needs to be widened so that the information can reach a bigger audience. A strategic alliance between government, construction industry and universities and research centers could work as an effective mechanism to boost the importance of the topic and to encourage coordinated action. International cooperation can play an important role in influencing governments in developing countries to give the necessary attention to issues related to sustainable building and urbanization.

2.3.2 Sustainable vs. Profitable Land Development;

There is the pre-conceived idea that environmentally friendly practices imply extra costs. The need to make additional investments is very often the excuse not to comply with standards and practices based on principles of sustainability. The construction industry complains of a lack of resources to invest in the technological changes required for the application of this concept, and they are concerned that their level of profits will be reduced. It is true that an initial investment is needed in order to support the development and production of appropriate technologies and building materials, but these are costs that can later be recovered. Besides, these costs can be substantially reduced if the construction sector works together and shares the responsibilities with the government, universities and other private sector related industries and institutions.

Governments are the ones to initiate changes with the development of a legal framework to encourage the application of appropriate standards and procedures. It is known that unless pressured, the construction industry will not introduce the required adjustments. A key factor is to change the way of thinking of private sector professionals and of the public in general. They need to realize the benefits and advantages of a built environment which is safe to both nature and to the people. As in the food industry, the construction sector could use environmentally friendly and sustainable practices as a market strategy to

increase the popularity and acceptability of their products. With proper information and dissemination, the public becomes more aware of the benefits that such practices represent for them and the environment. This could consequently have a positive impact in the sales of the offered products making these practices sustainable and profitable.

2.3.3 Mobilization of Resources;

One of the key challenges of sustainable construction is the mobilization of resources in order to support research, technological changes and feasibility studies for the production and marketing of new materials and technologies. Given the present situation, the government alone is not able to guarantee the necessary financial resources to support the above-mentioned activities. The private and academic sectors represent resources that can be tapped and directed at initiatives in the sustainable construction sector. Working together, the financing of activities, as well as the responsibilities of developing the sector can be shared by the three parties. In many cases, the issue is not the lack of resources, but the lack of co-ordination in managing them in a more efficient way. Converging resources from different public organizations could help to increase the impact of their utilization.

2.3.4 Public Awareness;

Sustainability is not only the responsibility of government and the construction industry. Citizens need to get involved and be aware of the impacts of their behavior and their use and misuse of resources. Participation by people is key to achieving decisions needed to secure changes in consumption patterns of the majority of the population. It is important to develop campaigns that on the one hand relay the benefits and opportunities with regards the use of environmentally-friendly building materials and products, and on the other, encourages the change of consumer habits towards a more sustainable use of resources.

2.3.5 Extending the Scope;

Environmental construction is very often identified only with building materials and technologies for the construction of houses. The integrated concept of housing as part as the urban fabric of a city are not often contemplated by the construction industry. In the same way, when talking about sustainability, the scope of sustainable construction needs to include environmental concepts, not only for housing, but also for the design and development of our cities. Alarming to note is the lack of consideration given by new developments to the sensible use of resources. In the name of modernity, other practices that often abuse and misuse materials and technologies have replaced environmentally conscious ones. Pavement of green areas, air-conditioning, use of bricks, asbestos, glass facades, to mention a few, are symbols related to modernity. Projects are designed and developed in isolation without thinking about the impacts of the new structure on the surroundings and on the city. The development of new materials and technologies need to consider that the majority of the population is poor with very limited investment capacity. The housing shortage is approximately of 1 million units. The construction industry could benefit from this market only if the solutions proposed in terms of new materials and technologies are affordable to them.

3. APPROACHES TO SUSTAINABLE URBAN DEVELOPMENT;

Whilst the main approach to sustainable development is still to use the phrase as a legitimizing mantra for maintaining 'business as usual' or minimal change in urban development policies, it is also possible to identify four sets of more radical ideas for sustainable urban development. These perspectives reflect different sets of values and judgments about both environmental and urban development: although they frequently indicate similar policies, most notably in advocating measures to limit the damage done to the environment by cars, in respect to land use their approaches can differ markedly. In each of the models, the boundaries of the city-region are potentially drawn differently, (Haughton G., 1997).

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3.1. Self-reliant cities approach.

The self-reliant city model has steadily grown more popular with environmental activists since the early 1980s (Morris, 1982). The overall model outlined here subsumes a wide variety of alternative approaches. The self reliant city model used here heavily emphasizes sorting out a city's problems from within; in particular by building local economies which are more self-reliant, meeting local needs through local businesses and co- operatives, and so on. This economic self-reliance in turn requires greater use of local environmental resources, and attention to minimizing and redirecting waste flows so that they can be absorbed either productively or with minimum ecosystem disturbance (Andruss et al, 1990). A bioregional emphasis is an important ingredient in most self-reliant city analyses: although defining a bioregion is invariably problematic, it is usually defend as a natural unit for addressing environmental concerns. Typically, a bioregion is a river basin, a valley, or some similarly distinctive ecosystem that provides natural boundaries for political and administrative units. In the new bioregional politics, ecological integrity requires a radical shift away from development in which humans dominate and control nature in favor of ways of working in harmony with it.

The new mission for settlements is integration with nature at the bioregional level, rather than the eradication of considerable parts of natural ecosystems. Linked to this, the self-reliant city movement has a considerable political agenda: to change moral values away from anthropocentric views of nature and towards more decentralized and cooperative forms of human Endeavour (Bookchin, 1974). From this perspective, strategies for sustainable cities are part of a far more radical project than merely achieving a weakly defined view of sustainable development. In land use terms, the overall policy is one of settlement decentralization (smaller towns, fewer large cities), combined with greater compaction and diversity (more houses, neighborhood-scale employers, shops, and so on) than in the typical low-density suburb. In this vision of the self-reliant city, it is through an intensive internalization of local economies and resource usage systems that the problems of uneven external exchange are addressed. In essence, the solution to non-sustainable patterns of external dependence is to reduce, rather than reshape, its levels. In effect, the decentralized bioregionalist system would fulfill its global duties by organizing itself internally along more sustainable and ethical lines.

3.2. Redesigning cities approach:

Interest has burgeoned among planners, architects, and others in the possibilities of achieving massive energy savings through more compact city forms, with higher residential density and a reversion to greater mixed land uses. A key assumption is that such changes in the urban fabric would reduce the need to travel long distances while supporting an extensive and viable public transport system, encouraging people to travel less by private transport, and thus reducing energy consumption. Underpinning this concern is the belief that existing patterns of urban settlement are resource-profligate, using a set of environmentally inefficient technologies designed with the assumption that cheap energy, land, water and waste disposal would remain abundant (Morris, 1990; Rees and Roseland, 1991). In effect, the "designers of machines, the designers of buildings, and the designers of cities could ignore the (environmental) efficiencies of these systems and their waste products" (Morris, 1990, p 21). However, cities are not inherently profligate in resource usage, and redesigning them could play a central role in reducing resource consumption and waste streams. These reductions would improve the local environment and deter further detrimental impacts on external environmental systems.

Rather than seeking to subordinate nature to every want of human residents, the new designers of cities and technologies that support urban living argue that it is essential to work with nature, and to seek to alter the environmentally damaging ways in which people behave within the city. Although many policy approaches to redesigning cities have much in common with the self-reliance school, the 'redesigning the city' approach is more anthropocentric and less nature centered. Rather than attempting to assimilate

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settlements with nature, this approach more frequently celebrates the 'urbaneness' of cities, raising residential densities and re-zoning areas for mixed uses in an attempt to break away from the perceived sterility of residential-only suburbs. Compact cities may have less nature in them, as more spare land is allocated to development, but possibly they will generate less negative external impact, not least reduced rural land take, whilst building their own cultural assets, particularly as the human urban fabric of buildings and parks.

The other dividing aspect is that the 'redesigning cities' approach recognizes the need for fundamental changes in political systems and in environ- mental ethics, but tends to see these as less transformative. Instead, there is a pragmatic concern with devising systems to alter human behavior by changing, through a variety of incentives and regulatory controls, the options open to individuals and businesses. Redesigning the city from within requires a broadly constituted approach to altering the urban environment, from improving building design (through better solar energy capture, improved insulation, use of less energy-intensive and recycled materials, etc) to aiming to create urban settlement forms that encourage a greater conservation of resources. In most redesigning approaches, changing regulatory regimes and standards play a critical role, although they are not necessarily divorced from market-based approaches such as charging residential developers full (rather than subsidized) infrastructure costs for water, electricity, roads and schools.

3.3. External Externally dependent cities approach:

The conventional economic approach to solving urban environmental problems by addressing externalities is well-illustrated in a World Bank policy paper, Urban Policy and Economic Development: an agenda for the 1990s (World Bank, 1991, p 52). This includes a diagnosis of urban environmental problems and a policy approach centered on the need to resolve market inefficiencies. Whilst acknowledging the importance of issues such as population growth, it argues that many urban environmental problems can be traced to market failings; in particular, inadequate preventative action through economic policy and management measures such as:

- Inappropriate economic policies (e.g., under pricing of water and other services), leading to resource depletion and higher levels of pollution
- Inadequate land use control or inappropriate land tenure systems that hinder effective land use or lead to overregulation of land markets.

The distributional impacts of economic measures are frequently overlooked in neo-classical economics-based analyses of market-led policies. Many cost- benefit analyses, for instance, tend to underestimate the uneven social and geographical nature of many environmental influences -- who benefits most, and where; who suffers most, and where (Collin and Harris, 1993). By not applying the means of problem resolution to those most environmentally disadvantaged, overall society and the economy may gain but those locally impacted upon might not. For example, a gasoline tax would not necessarily bring direct relief to those communities most affected by vehicle fumes and noise. However, market reforms are not necessarily geographically neutral in their design and implementation. The introduction of pollution trading permits in the US has been accompanied by the practice of 'off-setting' in areas with inadequate air standards. Unless improvements are achieved in the over- all ambient air quality, off-setting places local limits on factory expansions and openings, with factories able to trade polluting rights as reduced emissions in one factory allow increased emissions in another (Tietenberg, 1990; Victor, 1991). Market reform is essential if sustainable development is to be achieved, but this reform must be geographically sensitized, as well as linked to strong social justice programs and environmental standards setting to ensure that both local and global environmental carrying capacities are respected.

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3.4. Fair Shares cities approach:

This final version of the sustainable city draws on some of the most useful aspects of the previous models, incorporating them with an explicit concern for the debates over environmental and social equity. Although the temptation may be strong to withdraw from all extreme trading relationships, as in the local economic self-reliance model, it is probably not the best way of helping every area improve its living standards. Some sharing of environmentally benign innovations and technologies is always desirable, whilst geographically uneven resource allocation and efficiency in resource nurturing (e.g., crop growing) is likely to make some forms of trading also desirable, even to the most ardent adherent of self-reliance. What is needed is much more detailed consideration of the political, economic, social and environmental conditions under which resources are traded and waste streams sent out to other areas.

Examining the environmental value of the resource and pollutant streams that enter and leave city systems is one of the most difficult, yet valuable, reforms required in contemporary regional resource management. It is possible to gain some insights into the complexities of this task by examining two pieces of work centered on the disaggregation of urban externalities. Ravetz (1994) and White and Whitney (1992) argue that non-sustainable urban development involves external exchanges, where cities appropriate the carrying capacity of external areas (in terms of both resource capture and natural assimilative properties in respect of waste streams) without adequate compensation.

According to White and Whitney, who clearly attempt to insert a stronger environmental flavor to long-standing unequal global development debates, in many cases this unequal exchange causes hinterland areas to atrophy economically as well as environmentally. White and Whitney state that when the limits of a city's bioregional carrying capacity are reached, agreements could be reached between city and hinter- land areas with surplus carrying capacity, provided that no environmental damage is done in the process. Effectively, a region with surplus carrying capacity can 'export' some of this to areas experiencing problems. In a formal relationship, the city would pay compensation costs to the area with surplus carrying capacity. If environmental damage took place, there would also need to be additional reparations. Under the White and Whitney proposals, compensation might vary from financial payments to more favorable terms of trade or relaxed rules on emigration to the richer areas.

The great advantages of this model are its attention to reforming both the terms of trading of environmental assets and the emphasis on assessing regional carrying capacity as the starting point for exchanges of both resources and pollutants. Its great disadvantage is the difficulty of actually implementing it in policy terms. The main problem is the number of flows involved which would need regulating and compensation mechanisms built into them, either separately or in aggregate. Not only would each resource flow and pollution stream need to be assessed, so would its individual components; e.g., how do we differentiate between wood imported by different companies, from different countries, or between different types of wood, some harvested sustainably, some not. Even more difficulties arise with pollutant streams, given the complex reactions in air, water and land that result from elements emitted from different sources, and possibly different areas, but which combine toxically in one area. Conceptually, the idea is very attractive, but given the difficulties of gathering, analyzing and interpreting the large amounts of data required, for the immediate future it can function as nothing but a blunt tool.

3.5. Re-assessing models of sustainable urban development

According to Graham Haughton, it is possible to interpret these four models through a series of alternative analytical avenues. At one level, the different policy approaches represent competing models amongst academic disciplines and also those key decision-making organizations already responsible for resource management issues. A parallel view might be that the models relate to historical trajectories of urban development. Until recent years, free-market capitalism was fuelled by widespread environmental (and social) cost transference, as a means of underpinning business profitability. In which case, what we

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are currently witnessing may well be a fundamental ideological battle between those who advocate neo-liberal deregulatory trade reforms to bring about global competitiveness and others who argue for environmental re-regulation in the name of the ecological transformation of capitalism. The outcome of these epochal challenges may determine not just the future of capitalism, but also the functioning of future cities and indeed the very sustainability of the global environment.

4. THE SUSTAINABLE URBAN PROFILING PROJECT IN EGYPTIAN CITIES (RUSPS);

Rapid Urban Sector Profiling for Sustainability (RUSPS) is an accelerated and action-oriented urban assessment of needs and capacity-building gaps at the national and city level. It is currently being implemented in over 24 African and Arab countries. RUSPS uses a structured approach where priority interventions are agreed upon through consultative processes. The application of RUSPS methodology in Egypt has been adapted to fit local conditions and to satisfy local needs. The original methodology consists of three phases: (1) a rapid participatory urban profiling, at both national and local levels, focusing on governance, slums, gender and HIV/AIDS, and environment, plus proposed interventions; (2) detailed feasibility studies; and (3) project implementation. RUSPS in Egypt encompasses a national profile as well as profiles for different cities. In addition, RUSPS has been adapted for villages by considering local conditions.

4.1. Background

Located at the intersection of three continents, Egypt is considered the intermediate spot between Arab and African countries. It is an important Arab country with a total population of about 80 million inhabitants (2006), 62 percent of whom dwell in informal settlements. Indeed, according to the Ministry of Planning and Local Development, Egypt is largely informal in character, as it contains more than 1,200 slums and informal areas. However, the real number of informal areas is matter of disagreement between governorates and the Ministry of Planning and Local Development.

The problematic nature of urban expansion on agriculture land has obligated the government to focus on rural Egypt as a priority. In 1985, aerial photos of Egyptian villages recorded the situation and produced maps defining village boundaries called "Hayez 1985". In cities, many regulations and decisions attempted to stop the informal expansion of slums. These culminated in the military decree of 1996 that prohibited building on agriculture land. Nevertheless, dynamic urban expansion not only continued but also accelerated, in order to provide shelter for the increasing population. Lately, the government established several principles and development priorities. The principles included sustainable development, participation, and decentralization. The development priorities included slum upgrading and preserving agricultural land. These concepts enabled the implementation of RUSPS as a mechanism for identifying issues and the actions needed.

4.2. RUSPS Project in Egypt

RUSPS in Egypt was initially piloted as a tool to undertake rapid assessment in two coastal cities, namely Alexandria and Suez. Later, RUSPS was applied as the first step in implementing City Development Strategies in selected cities. RUSPS would essentially define these cities. The selected cities exhibited variations in size and nature (e.g. Baltim represented small cities, Tanta represented medium-sized cities in the Nile delta, and Rosetta was chosen as a unique city with cultural heritage). RUSPS was also undertaken in Menouf city and El Menya city, which was a representative of small and medium-sized cities in rural Egypt. Suez and Alexandria Cities are representing coastal gates of Egypt. Each city is published in a separate report. RUSPS in Egypt was localized to fit national development priorities for defining rural strategies. The village program managed by the General Organization for Physical Planning

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(GOPP) seeks to control physical village boundaries and identify agreed-upon development projects. The aim is to develop options for formal inter-agency collaboration and integrate a wide range of stakeholders in a single response mechanism.

The sustainable urban profiling project consists of an accelerated and action-oriented assessment of urban conditions, focusing on priority needs, capacity gaps, and existing institutional responses at local and national levels. The purpose of the study is to develop urban poverty reduction policies at local, national, and regional levels, through an assessment of needs and response mechanisms, and as a contribution to the wider-ranging implementation of the Millennium Development Goals. The study is based on analysis of existing data and a series of interviews with all relevant urban stakeholders, including local authority and government institutions, civil society, the private sector, development partners, academics, and others.

4.3. The objectives of the project can be summarized thus:

- identifying priority issues and needs
- Identifying capacity gaps and existing potential resources
- enhancing decision making and inducing cooperation

The goal is to develop urban poverty reduction policies and contribute to wider-ranging implementation of the Millennium Development Goals. Due to the complexity of the problems facing Egypt, its local conditions can be analyzed on two levels: the national level, where there is enabling development, and the local level, where cities and villages are demanding development.

4.4. Main Themes in Project

In the core of the initial project methods, topics are concentrated in four sectors: governance, slums and shelter, gender, environment, Basic Urban Services Issues, Local Economic Development, and Heritage. In each sector, a general background is provided and the regulatory framework, institutional set-up, performance, accountability, and capacity buildings gaps are assessed. Priority needs and projects are revealed.
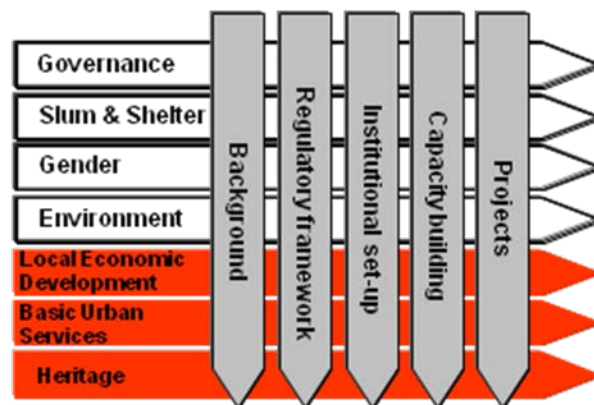

Figure2. Issues added to the initial project; Source: UN-HABITAT, 2006- Edited by author based on the Project Data

4.5. Problems and Challenges at the National Level;

The enabling environment is characterized by a weak institutional set-up, overlapping jurisdiction, and a lack of cooperation among those institutions that have an influence on planning and decision making.

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Furthermore, Egypt's intricate legal framework often acts as a constraint to urban development. Economically and according to the World Bank, Egypt will need to achieve a sustained real GDP growth rate of at least 7 percent. Annual unemployment rates must be reduced to a manageable level. At the same time, the population problem is extremely important, as the availability of inhabitable and arable land has not grown at the same pace as the number of people, despite efforts to reduce population pressures along the Nile valley.

4.6. Problems and Challenges at the local Level;

Cities face many development challenges. The lack of cooperation among institutions, ineffective jurisdictions, overlapping authority, and inefficient capacities hinder development and the achievement of objectives. There is a need to identify gaps and root causes of problems and to determine priorities. However, given the limited economic resources, this became a challenge. In spite of different efforts, the urban sector still lacks progress and remains at the top of the government's agenda. Cities suffer from growing slum areas where social and security problems are the main challenges for development. Understanding and structuring these challenges are the first tasks in urban development. City profiles will help outline the main gaps. Table(1) present the high-priority projects in four cities.

Figure3. Problems in Slums & Shelter sector - Source: UN-HABITAT, 2006

4.7. Results & Outputs at city level;

- Empowerment of the community to implement policies, through participation in developing their locale and managing their activities.
- Improvement of living conditions in poor areas and the focusing of political and economical efforts on them.
- The highlighting of investment opportunities.
- Documentation of current conditions and the creation of profiles that reveal the situation from all sides.

Besides creating an integrated profile for many cities in Egypt (Alexandria, Suez, Tanta, El Menya, Rosetta, Menouf, Baltim), one of the important results was the collection of themes that need to be scaled up. Common concerns were inserted as main priorities when developing strategies. In addition, the crosscutting relationships were easily perceived. Different impacts and effects in one sector become a threat in another and vice versa. This analytical result permits a better understanding of the problems and their complexity.

Following are examples of the interrelationships and the multi-sectoral nature of the problems.

- **Governance – LED Relationship;** Local authorities sell land in industrial areas to raise revenue. In doing so, they compete with investors in developing their own industrial zones.

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- **LED – Environment Relationship;** A deteriorated environment impedes access to foreign investment funds in Suez. International banks demand environmental sustainability to protect investments.
- **Gender – Environment Relationship;** Women in Baltim are threatened by the severe pollution in El-Borollos Lake. Many women are in ill health and complain of kidney failure. Research indicates that the health problems in Baltim are due to polluted water.
- **LED – BUS Relationship;** Lack of industrial waste management weakens the competitive edge of the Ain El-Sokhna industrial estate. And lack of availability, quality, and coverage of vital infrastructure, such as the road network, impedes economic development in Alexandria.
- **BUS - Environment Relationship,** Scarce sanitation in Baltim leads to an intensive water pollution problem in El-Borollos Lake. Sewage is directly discharged into the lake without treatment.

Table 1: Present the high-priority projects in four cities
Source: UN-HABITAT, 2006

Urban Development Sector	Cities			
Slums & Shelter	**Baltim**	**Menya**	**Tanta**	**Rashid**
City Strategic development plan	■	■	■	■
Building capacity and training on management of small projects	■			■
Extending and improving the projects of small investor" marketing, credits	■			■
Slum upgrading	■	■	■	■
Upgrading historical sites				■
Basic Urban Services	**Baltim**	**Menya**	**Tanta**	**Rashid**
Drinking water purification plant			■	
Establishing or improving rail station			■	
Improve accessibility to sanitation	■	■	■	
Improve fishing activities by establishing fishing port				■
Urban Environment	**Baltim**	**Menya**	**Tanta**	**Rashid**
Specifying area for local craft and small projects	■		■	
Buying cars and equipment for gathering solid waste			■	
Improving solid waste management and recycling		■	■	■
Establishing river front promenade	■			

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5. RECOMMENDED ACTION

Throughout this paper we have seen that sustainable urbanization is the tasks of various stakeholders who need to join forces in order to generate the attention that this concept deserves. This requires the generation and strengthening of strategic alliances that allow concerted action between the different stakeholders that play a role in developing positive synergies with their joint actions. Use of existing networks and alliances is recommended. Among others, the actions recommended for the various role players are:

5.1. Research Community

- There is an imperative need to analyze and measure environmental impacts related to the urbanization process, highlighting the need to reform the urban management models.

- To complement research on appropriate techniques and materials based on existing experiences and their lessons learned with feasibility studies on how to industrialize their production and what could be the marketing strategies for the promotion and selling of the products.

- To seek the incorporation of sustainable construction and urbanization issues and concepts within university curricula so their application can become part of the routine performance of professionals.

- Before drawing conclusions and developing solutions, problems and barriers for sustainable construction should be analyzed in an integrated and holistic manner, within the specific local context. An environmental profile focused in sustainable construction could be a useful tool for this purpose.

5.2. Governments

- To include issues and concepts related to sustainable practices within government development policies. Depending on the commitment and the will of the government, sustainable development will receive more or less attention.

- To support financial alternatives that give priority to credit to industrial sectors that promotes sustainable housing and sustainable development.

- To assist and support research institutions with funds and equipment and to facilitate the creation of spaces for discussions and debate between the various actors.

- To create support and technical assistance projects with local governments, sharing provision of human and financial resources to further develop sustainable techniques and technologies for the self-help construction process with traditional systems.

5.3. Local Governments

- To establish in the cities, environmental management instruments that allow the construction, maintenance, re-establishment and protection of the built environment, the natural environment and the surroundings.

- To promote the elaboration of urban and zoning plans that are based on sustainability principles and include the indicators for cities for life.

- To develop and promote sustainable urbanization through the use of local resources, capacities and traditional techniques.

- To develop institutional capacities in order to establish an evaluation system of environmental

impacts, generating information, monitoring and the follow up of the construction activity in the cities.

5.4. Non-governmental Organizations (NGOs)

- To promote the creation of alternative construction micro-enterprises for the placement and promotion of clean and sustainable construction activities in the cities.

- Systematization and dissemination of lessons learned from experiences developing practical guides and catalogues for their promotion in the construction market.

5.5. The inhabitants (users)

- To seek information and to participate in the processes for the formulation of Local Agenda 21, urban development plans and the investment plan of their neighborhoods and their cities.

- To promote the acceptance of alternative technologies that contributes to sustainable development.

- To participate in auditing of government and private sector actions so that demands are accompanied by sustainable investments.

All these actions are valid only if community attitudes and positive values towards environment are taken into consideration and the success depends on the incorporation of these recommendations by urban/environmental policies.

6. CONCLUSION

Despite some experiments, it remains true that urban areas are desensitized to the wider impact of environmental damage caused by residents and businesses. There are various reasons for this: the level of information needed to raise awareness of the nature of transferred impacts is generally not available, whilst systems for either reducing transferred costs or for introducing compensation remain underdeveloped. There is also the problem of legal-jurisdictional boundaries and responsibilities in environmental management, where boundaries too often insulate politicians and other decision-makers from concern over the external impacts of their decision-making (Beatley, 1991; Ravetz, 1994). In consequence, sustainable urban development will require governance, market and regulatory changes not only for cities and nations, but also for environmental hinterlands. As these are in many instances global, it is global reforms in trade and in environmental standards that will force the shift towards sustainable urban development. In addition, for consumers, businesses, and politicians to make more environmentally sensitive decisions, all will need greater knowledge of the damaging impacts of their actions and a greater awareness of the alternatives available to them. The sustainable city's citizen will need to be better informed, embracing practical ethical considerations for everyday decisions in ways that are currently not the norm.

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ACKNOWLEDGMENT