The quest for sustainability in Cypriot towns

Derya Oktay, Ph.D
Visiting Scholar
OISD - School of the Built Environment
Breakfast Research Seminars
10 February 2009
Structure of the presentation

Understanding the concept of sustainability; existing situation in urban environment in Cyprus

Method of study

Assessment of traditional and new urban/housing patterns in Cypriot towns with respect to sustainability
- Contextual patterns
- Social-spatial patterns
- Movement patterns
- Patterns of open space and landscape
- Building patterns

Conclusion
The concept of sustainability

Since the first inception of the Brundlant Report (WCED, 1987), the sustainable city has been recognized as the city that enables all its citizens to meet their own needs and to enhance their well-being, without degrading the natural world or the lives of other people, now or in the future.

In the context of urban development, it is argued that achieving sustainability involves devising a socio-economic system which ensures that these aims are satisfied.

In this context, the three E’s of Sustainability have been focused in most cases:

Environment ■ Equity ■ Economy
The correct formula should then be: 3 E’s + SS
SOCIAL SUSTAINABILITY:
(sustained local values, sense of belonging, sense of community, attachment, ..)

EQUITY
(dignity of the human spirit, the right of every human being to pursue its own destiny)

ECONOMIC VITALITY
(increased self-sufficiency, increased use of natural and local resources, ..)

ENVIRONMENTAL QUALITY
(reduced waste/pollution, reduced distances, reduced greenfield development, ..)

URBAN SUSTAINABILITY
Method of research

University of California, Berkeley (1996) & University of Michigan, Ann Arbor (2005):
- Literature survey
- Analysis of new approaches to urban planning and design
- Interviewing architects practicing in the field of sustainable urbanism

Eastern Mediterranean University, N. Cyprus (1995-2006):
- Observations on sites (in 13 years, at different times of the year)
- Interviewing local people and professionals
- Resident survey on certain issues (the use and meaning of open spaces)
Assessments of traditional and new urban/housing patterns in Cypriot towns with respect to sustainability
The existing situation

The cities on the island of Cyprus have undergone substantial changes under the control of each successive regional power since very early times (about 6500 BC) including the Phoenicians, Persians, Greeks, Romans, Venetians, Ottomans and British... and are still undergoing changes owing to the local socio-economic dynamics in both sides of the island.
In the existing picture of the newly developed urban environment, most urban and housing areas are missing vital aspects of sustainability and lacking environmental and humane qualities both at urban and architectural level.
The reasons:
- Institutional problems / lack of master plans / lack of development control
- Ignored quality and use of the spatial environment
- Lack of adequate knowledge and experience of implementing sustainable buildings/housing
- Professional attitudes prioritizing ‘profit’ and ignoring environment and tradition
- Lack of pressure by local people towards a better environment

Result:
- Lack of physical and social cohesion in urban settlements
- No environmental and humane qualities, and no sustainability
What do we need?

Promoting sustainable lifestyles in our towns and cities depends mainly on the design of the physical environment. Therefore, a set of key planning and design principles will be proposed here in order to deliver sustainable urban and housing patterns through exploring the qualities of “traditional urbanism and architecture” in Cyprus, where the settlements of a variety of periods in its long history were good examples of sustainable design in their time. They represented good uses of local resources matched with local skills, and produced a built environment which met people’s needs.
Urban/housing patterns in Cyprus

Issues of concern:

- Contextual patterns
- Social-spatial patterns
- Movement patterns
- Patterns of open space and landscape
- Building patterns
Contextual patterns

Traditional pattern:

- Cohesive urban pattern with organic layout and open spaces
The district/neighborhood as the identifying element
- A vibrant city centre with a variety of forms/buildings, uses and meaning
- Unity in variety
Organic growth in which the street pattern was gradually adjusted and changed according to the needs of local people and topography.
Architectural layers reflecting diverse periods side by side in the same city, in the same street...
New pattern:

- Scattered development
- Unclearity about `where the city centre is` ...
- slab-like apartment buildings with no identity
- ignored open spaces (both physically and functionally)
- inappropriate land use
- `city for vehicles`
Locally inappropriate buildings of diverse character lacking aesthetic harmony
Social-spatial patterns

Traditional pattern

- ‘neighbourhood’ (*mahalle*) as a social-spatial entity
Street as a ‘social space’
Well-defined open and semi-open spaces (transitional spaces) for urban daily life
- **Havli (courtyard) as an ‘open to sky room’**
New pattern:

- social segregation due to incoherent formation of buildings creating “no man’s land” around buildings
Movement patterns

Traditional pattern:

- Square as a place for urban daily life
- Hierarchy of streets
- Well-enclosed spatial character added to the humane quality of the street

© D. Oktay
New pattern:

- Squares as vehicular roundabouts without any public use
- Streets as mere vehicular channels without any spatial definition and public use
- Unavailability of perception and use of the street space by people as a place of communal use
- No opportunity of using bicycles as a means of transportation despite the appropriate climate and topography
Patterns of open space and landscape

Traditional pattern:

- Green image
Hierarchy of residential open spaces: *havli* (courtyard), *sundurme*, veranda, sofa, ....
Havli (courtyard) providing the inhabitant with direct access to nature
Local vegetation and landscaping
Self-sustenance through productive landscape
New pattern:

- open spaces lacking green image
Lack of hierarchy of open spaces
Building patterns

Traditional pattern:

- Integration of the building with the site
- Integrated open, semi-open, and enclosed spaces
- Semi-open spaces as transition spaces between indoor and outdoor spaces, providing climatic comfort and convenience for daily use throughout the year
Locally appropriate, energy efficient building construction and materials
Hand crafted building detailing
Color of the building – construction materials carrying their own color
New pattern:

Contemporary housing disregarding timeless traditional building patterns...

- No good integration of building with the site and the garden
- Non-flexible building construction systems lacking user participation and energy efficiency
- Buildings painted white or with colors which are specified from catalogues without testing and experimenting to find the most appropriate and pleasing color to give life and local identity to the building
- Residential open spaces as left-over spaces lacking definition and native vegetation

© D. Oktay
Lack of `outdoor rooms` in houses
Life in the `air-conditioned` interior!
Conclusion: Recommendations for future housing developments

For a more sustainable housing development in Cyprus, the following sustainability priorities should be focused on:

- **Sustainable urban patterns:** design solutions that are sensitive to the local contexts and sympathetic to local people’s needs
- **Identifiability through physical and social cohesion** should be re-interpreted in the newly developed housing environments against the negative effects of the sprawl
- **The circulation elements** have to be improved in a way that promotes efficiency, is environmentally sensitive and prioritises the needs of pedestrians, cyclists and public transport users

© D. Oktay
Nature must be part of the city culture for practical use as well as for the recreation of the inhabitants.

Public spaces should be paid great attention not only in central districts, but also in the urban edge and newly developed settlements, where the space between them is becoming more important as densities increase.

Traditional patterns of open spaces, such as the concept of courtyard, should be reinterpreted and modified both in row housing and multi-storey housing developments.
Each building pattern should be formed with sensitivity to energy savings, climatic response, and social and cultural specificity

Building geometry should well integrate with the site using local materials and vegetation

The design of enclosed, semi-open and open spaces should be paid attention so that a seamless whole is created

and finally

Local people’s expectations (from urban/housing environment) should be brought to a higher level through various means of education
Further studies

- Survey Research on Measuring the Quality of Urban Life in Famagusta as part of the International Program of Research on QOUL in World Cities, coordinated at the University of Michigan, USA, and funded by the Higher Council for Research & Technology, Turkey. (Sep. 2006 – Oct. 2008; data analysis continues).
Research on Sustainable Housing Developments and Social Quality (Oxford Brookes University, Winter & Summer 2009)
For further reading


________, “Design with the Climate in Housing Environments: An Analysis in Northern Cyprus”, Building and Environment, 37/10, 2002,1003-1012.


Thank you... Tesekkürler!