Architecture and Planning Journal (APJ)

Volume 23 Issue 2
SPECIAL ISSUE
RETHINKING ARCHITECTURAL EDUCATION
2016 - TOWARDS A BETTER PRACTICE

Article 22

ISSN: 2789-8547

March 2016

ARCHITECT'S ROLE IN ENHANCING SOCIALLY SUSTAINABILE COMMUNITIES AND ITSREFLECTION ON ARCHITECTURAL EDUCATION

Mohamed Elshafei
Assistant Lecturer, Architectural Engineering & Environmental Design Department, Arab Academy For Science , Technology and Maritime Transport, Smart Village Campus ,Cairo, Egypt, mohamed_mosaad@aast.edu

Kareem Hammouda
Assistant Lecturer, Architectural Engineering & Environmental Design Department, Arab Academy For Science , Technology and Maritime Transport, Smart Village Campus ,Cairo, Egypt, k.hammoud@hotmail.com

DOI: https://doi.org/10.54729/2789-8547.1091

ARCHITECT'S ROLE IN ENHANCING SOCIALLY SUSTAINABILE COMMUNITIES AND ITSREFLECTION ON ARCHITECTURAL EDUCATION

Abstract

As the world these days is moving steadily towards sustainability and creating a better global community and this vision is what exactly the new communities need to become distinct and attract residents, so to achieve this vision, there are a set of sustainable design principles, which must be dealt with to reach the desired goal creating a Sustainable Society depends on environmental, economic, social and urban principles in which this research discusses the role of the architects in creating a successful society by enhancing the social sustainability within the built environment. The Professional role of architects is a process of preservation and creation of a required quality of the built environment according to the community ,in which his responsibility is not limited on the health and safety of the community users but it extends to the effects of the architectural products on the environment and for enhancing the social sustainability, architects must integrate in the community development as citizens as well, for achieving a successful social sustainable community. The architectural education is the base that builds the architect's abilities and capabilities to perform his role, in which the education should be reset to enforce the notions of architecture beyond the building, and architect as a cooperative interdisciplinary player rather than a singular actor.

Keywords

Social Sustainability, Architects, Society, Architectural Education

ARCHITECT'S ROLE IN ENHANCING SOCIALLY SUSTAINABILE COMMUNITIES AND ITS REFLECTION ON ARCHITECTURAL EDUCATION

M. M. ELSHAFEI[1] & K. N. HAMMOUDA[2]

ABSTRACT

As the world these days is moving steadily towards sustainability and creating a better global community and this vision is what exactly the new communities need to become distinct and attract residents, so to achieve this vision, there are a set of sustainable design principles, which must be dealt with to reach the desired goal creating a Sustainable Society depends on environmental, economic, social and urban principles in which this research discusses the role of the architects in creating a successful society by enhancing the social sustainability within the built environment.

The Professional role of architects is a process of preservation and creation of a required quality of the built environment according to the community ,in which his responsibility is not limited on the health and safety of the community users but it extends to the effects of the architectural products on the environment and for enhancing the social sustainability, architects must integrate in the community development as citizens as well, for achieving a successful social sustainable community.

The architectural education is the base that builds the architect's abilities and capabilities to perform his role, in which the education should be reset to enforce the notions of architecture beyond the building, and architect as a cooperative interdisciplinary player rather than a singular actor.

KEYWORDS

Social Sustainability, Architects, Society, Architectural Education

1. INTRODUCTION

The paper will be first introduced the concept of sustainability and its importance, and the general notions and principles that align this concept, then it will discuss in more details the idea of social sustainability and its principals, which includes social equity, diversity and cohesion in the community, and enhancing its Healthy Life Style, and will detail the role of the architect as a professional and as a member of the society in enhancing the social sustainability. This role could not be defined unless reflected in the architectural education and the background that forms the architect's knowledge, which is to be shifted towards a more user oriented, cooperation based discipline.

[1] MOHAMED MOSAAD ELSHAFEI
Assistant Lecturer, Architectural Engineering & Environmental Design Department, Arab Academy For Science , Technology and Maritime Transport, Smart Village Campus ,Cairo, Egypt
MSC (Master of Science in Architecture Engineering) 2014 , AASTMT ,Alexandria Campus, Alexandria, Egypt
PHD Degree Student , Faculty of Fine Arts , Alexandria University, Egypt

[2] KAREEM NABIL HAMMOUDA
Assistant Lecturer, Architectural Engineering & Environmental Design Department ,Arab Academy For Science , Technology and Maritime Transport ,Smart Village Campus , Cair , Egypt
M.Arch (Master of Architecture) 2008 – DIA – Bauhaus , Germany
PHD Degree Student , Faculty of Engineering , Ain Shams University, Egypt

2. SUSTAINABILITY

2.1 Sustainability Concept Background:

The concept of sustainability emerged in the 1960s in response to concern about environmental degradation resulting from poor resource management. As the environment became increasingly important as a world issue, sustainability was adopted as a common political goal. In 1960, the Organization for Economic Cooperation and Development (OECD) was created to promote policies that would achieve 'the highest sustainable economic growth and employment in Member countries in order to stimulate employment and increase living standards' (McKenzie, 2004)

In 1980, the International Union released the World Conservation Strategy for the Conservation of Nature. The strategy defines the 'main agents of habitat destruction and environmental degradation as poverty, population pressure, social inequity and the terms of trade'. Sustainable development was defined as the maintenance of essential ecological processes and life support systems, including those of humans. (McKenzie, 2004)

2.2 Sustainability Importance:

The concept of environmental 'sustainability' takes a great deal of work to know how can we define and measure it, and what policies and institutions can be implemented in order to achieve this sustainability, recently, economic and social sustainability have been adopted as additional and concerns in which we can define Sustainability as a broad term that generally means that a person or society lives within the means of what the Earth can provide over a long term. When a process is sustainable, it can be carried out repeatedly without negative effects on the environmental, social or economic aspects.

The definition of Sustainability as stated in the United Nations world commission of environment and development is: **"Sustainability meets the needs of the present without compromising the ability of future generations to meet their own needs."** (United Nations, 2000)

2.2.1 The "Triple Bottom Line:

It is a common theme for decision-making in a sustainable society. It refers to the consideration of environmental sustainability, social equity and economic stability aspects of a particular decision.

2.2.2 Cradle – to – cradle / cradle – to – grave processes

A sustainable society develops "cradle-to-cradle" processes to replace "cradle-to-grave" conventional processes of post-industrial society by using non-toxic and/ or biodegradable materials and products

In a "cradle-to-grave" process shown in figure (1), materials are moved in a linear way rather than through a recycling process, this one-way process destroys the natural landscape on which it depends, a sustainable or "cradle-to-cradle" shown in figure (2) process is one that is continually self-renewing. Linear one-way processes must be replaced by cyclic flows, continuously regenerating materials that support life.

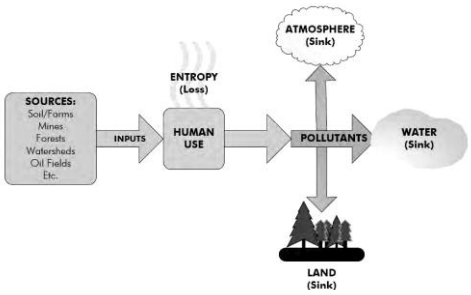

Fig. 1 Cradle to grave concept diagram

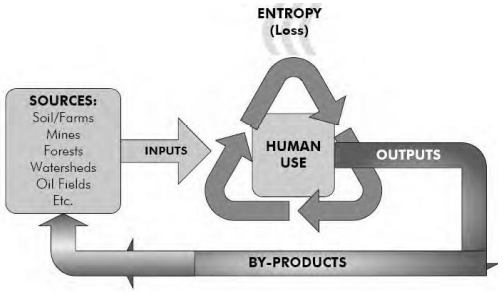

Fig. 2 Cradle – to – cradle concept diagram

References: Elshafei.2014

2.2.3 Sustainability Relations and How it can be presented

One of two models commonly represents the mutual relations between the environmental, social and economic aspects of sustainability. (WACOSS), The first model represents three concentric spheres in which the 'economic' and 'social' spheres are performing as dependent on the health of the environmental sphere as shown in figure (3), Recently sustainability represented by a wide mode of thinking in which the three spheres of influence are performing equally and overlapped as shown in figure (4)

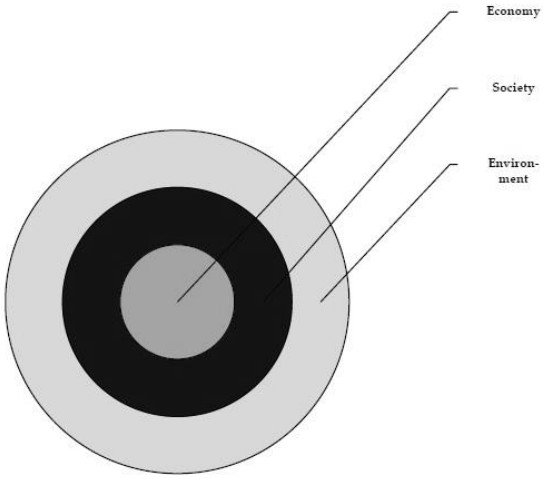

Fig. 3 Social Aspect Performs dependent on the others

Reference: (McKenzie, 2004)

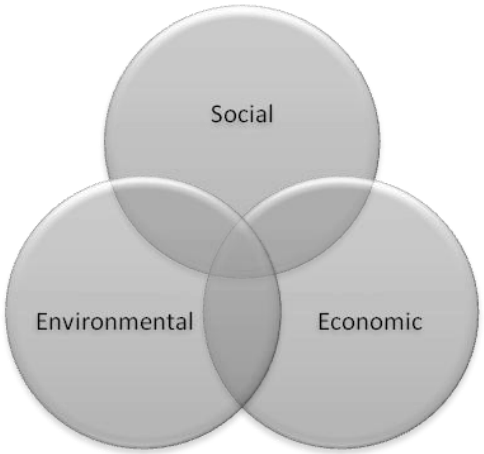

Fig. 4 Overlapped & Equal Spheres

Reference: http://www.hatchmott.com/expertise/sustainability

3. SOCIAL ASPECT (McKenzie, 2004)

In many views regarding sustainability, two main types of hypothesis interpret the role of the 'social' element:

A. The success of sustainable development programs is determined according to their ability in achieving the highest increase in living standards measured against the least possible environmental degradation. So the social development and environmental protection are seen opposite to each other.
B. Sustainability definitions that arise in environmental and economic contexts, consider the social sciences very useful disciplinary tools for promoting the message of environmental and economic stability.

4. SOCIAL SUSTAINABILITY

Social sustainability occurs when the formal and informal processes, systems, structures and relationships actively support the capacity of current and future generations to create healthy and livable communities. Socially sustainable communities are equitable, diverse, connected and democratic and provide a good quality of life. (McKenzie, 2004)

- **Social Sustainability Principles**

- Social Equity (Thynell. 2008)

Provision of equitable opportunities, particularly the vulnerable. Equity is the filter through which the other principles are viewed. (Kavanagh.2013)

- Social diversity

Groups; students, children, women, elderly, religion, ethnicity, and disability are part of human diversity

- Interconnectedness (Elshafei.2014)

Social connectedness can be defined as the relationship strength between the individual and his/her wider social environment.

Social connectedness is related to some ideas like social capital, social cohesion and social inclusion in which it deals with the people's level of participation in social life and the relations that exists between those people and their attitudes towards society.

The importance of the social connectedness originates from the idea that social ties and rules of reciprocity and trust generate many advantages for the society as a total.

- Healthy life styles (Elshafei.2014)

Urban planning and health were two sides of the same coin because of their strong linkage. Thus, the links between town planning and health were considered as a profession. However, this consideration was forgotten and the planning, development and health fields have not been as closely aligned as before.

These principles could be translated in a checklist for healthy lifestyles as follows:

- Environment and health
- Social cohesion and social connectivity
- Social infrastructure
- Public open space
- Community safety and security
- Quality employment
- Transport and physical connectivity
- Housing
- Physical activity
- Healthy food

5. SOCIAL SUSTAINABLE COMMUNITY DEVELOPMENT

Sustainable community development means to signify the changes that can move this community towards sustainability in which this changes trying to sustain the eco system without harming the environment , and The level of this sustainable development depending on a huge view of the activates taking place in it, considering nature, culture and politics as well as economics

Each individual has responsibility through their own actions to shape the community and its future. This means development begins at the individual level. Because people both live in a specific community as well as in the natural world, as is recognized in all communities around the world which use 'sustainable community' as a benchmark (Barton, 2000)

Introducing the social aspect in a sustainable community development comes back to the relation between the community members and its development in which the relationship between man and community at the same importance to its relationship with the surrounding environment and here comes the architect's role in the community development as the works of the architectural profession, which vary from design to planning, support the development of a community as a citizens and as a professionals.

6. ARCHITECTS RESPONSIBILITY WITHIN SUSTAINABLE COMMUNITY

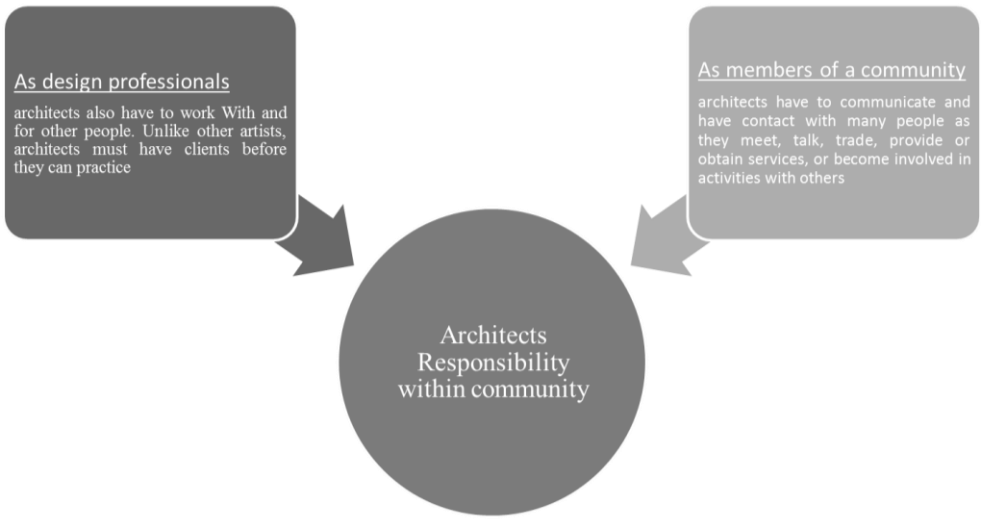

Fig. 5 Architects responsibility within sustainable community
Reference: Chappell & Willis, 1992

Therefore, this means that architects' behaviors in both personalities as a citizen or as a professional are dominantly part of the social systems that affects the community development

Also the creation of a built environment consumes energy and resources so architects have a very important responsibility through their actions and its reactions that could affect the ecological features and systems, this means that this responsibility is not limited on the health and safety of their design products users but it extends to the effects of this products and creations on the environment at both local and global levels.

Architect as a citizen or a professional has an important role in social and ecological systems depending on a sustainable dimension as the society is a part of the ecological system in which the architect's actions are related to the social systems but this actions including activities, behaviors and built environment creations impacts, all related directly to the ecological system as shown in the figure

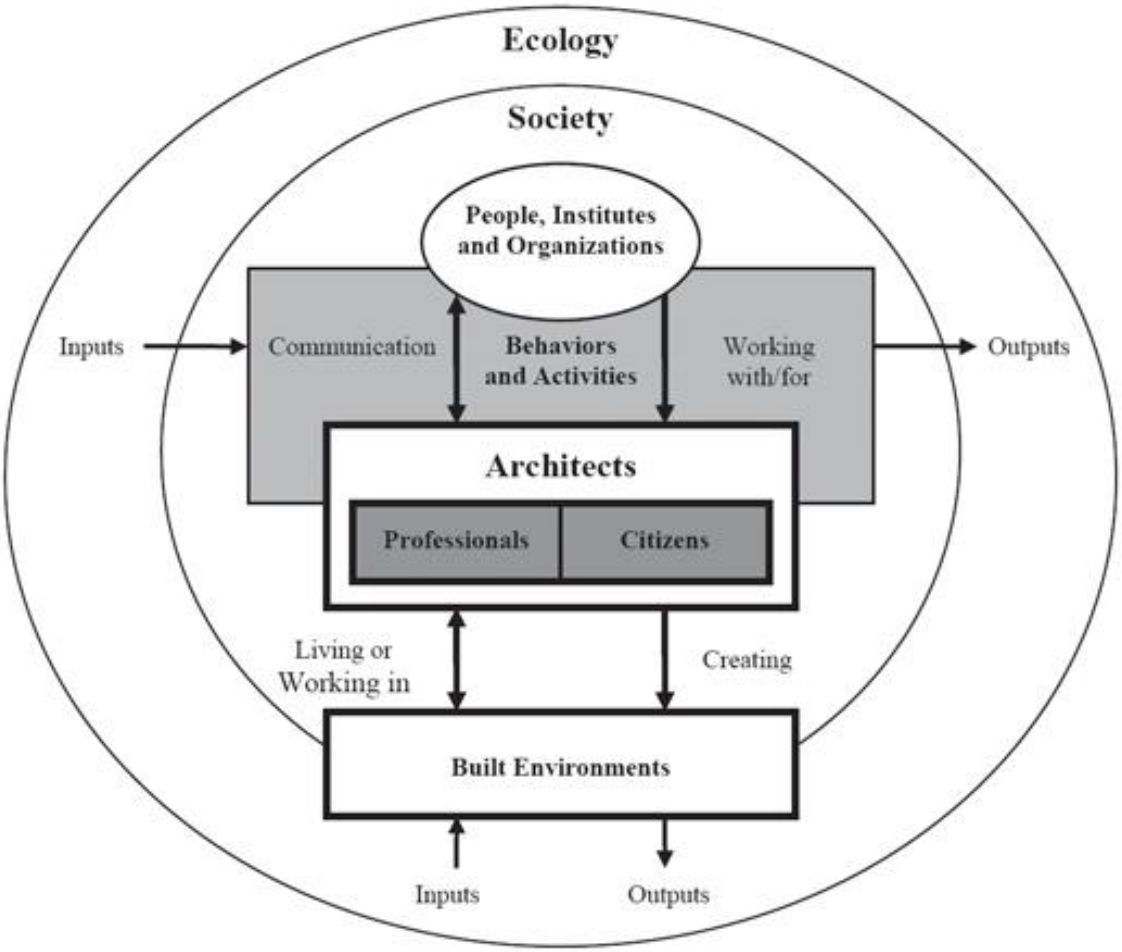

Fig. 6 Relationships between architects role and Social and ecological systems
Reference: Sant, C., & Vale, B. 2009

7. ARCHITECT'S ROLE IN ENHANCING SOCIALLY SUSTAINABILE COMMUNITIES

7.1 Architect's role in enhancing the social equity:

Social equity appears strongly in the planned communities , so the architect has an essential role in achieving and strengthening aspects of social equity .And one of the most important features is the empowerment, is the ability of the planner or the architect to give a chance for all users and especially 'poorest of the poor' to take direct control over their lives and give them a chance also to be able to be the agents of their own development and thereby every human uses architect products has the opportunity to be a recognized and respected contributor to family, community and society.

7.2 Dealing the architect with the social diversity:

The architect must observe the social diversity which means that the community is consists of a different and diverse elements lives with each other and when the architect deals with a built environment in the community for developing it to suit the needs of its users, many different elements must be studied, whether the difference in terms of gender, ethnicity , age, disability or religion, and no one can deal with all these elements except the architect because he is primarily responsible for the comfort of all types of his architectural products.

7.3 Architect's role in Strengthening social cohesion in Community

Social Connectedness is the power of the relationship between the individual and the surrounding social environment, and this power depends mainly on the social cohesion and inclusion, and here the architect's role appears in consolidation of the social inclusion sense in which his designs and imaginations give the right for all users to live and deal without the sense of marginalization or segregation according to the social levels, and this what generates a sense of social interdependence through the treatment of all segments of society equally and the existence of mutual trust in the community

7.4 Architect's role in Creating a Healthy Life Style Community

The Architect have an essential role in planning where the people can live so that the health of the individual could be maintained , as he is the one who determine the place for the industries gatherings , living places and entertainment without compromising the environment or the health of the individual, also the architect responsible for the creation of various public open spaces for enhancing the healthy life style and strengthen the social cohesion between the different social segments of the community

Transportation and traffic lines in the built environment either public, private, bicycle or Pedestrian regions and this leads to the architect's role in controlling the physical activities for individuals and the relationship of each of these points with the housing and how close is it from industries and pollution regions.

8. CONCLUSIONS

ARCHITECT'S CHARACTER & REFLECTIONS ON THE ARCHITECTURAL EDUCATION

8.1 From the above points, we conclude the role of the architect in the socially sustainable communities; the architect should bear characteristics and capabilities to perform such role, which would expand the knowledge base inside and outside the profession. These include ability to:

- Cross-pollinate ideas.
- Identify the client and 'go beyond the building' – analogous to the medical notion of 'going beyond the patient'.
- Apply modes of thinking analogous to that used in legal education.
- Connect all learning to the liberal arts and sciences where certain types of pedagogical elements are created and used, such as foundational concepts,
- 'Learning by doing'، and using the campus and the community as a laboratory.
- (This includes using research as a mechanism for working with facilities and operations)

Being an architect also included:

- familiarity with rules, codes, specifications and practice;
- An understanding of general systems theory and function; (Glyphis.2001)

8.2 The architect should be able to enhance social equity, diversity and cohesion in Community, and enhancing its Healthy Life Style by devoting his technical knowledge along with knowledge absorbed from the surrounding user and improve the users' grasp of tackling his problems. Thus, the architectural education should be altered to be train the architect that architecture is an understanding of design that goes beyond buildings, encourage, and develop the architect's ability for interdisciplinary cooperation.

The architectural education discourse has always been focused on developing the architect's abilities and capabilities of building formation, in terms of form, function and

constructability, and developing the architect's individual personality, to enhance his ability to imprint this character or personality on his architecture. Thus, the current architectural education stream could be developed in order to prepare the architect to perform his role in developing sustainable communities; the architectural education should be reset to emphasize several notions that should be deeply embedded in the architect's personality.

8.2.1 Facilitating User's Empowerment:

The architecture student should be able to understand the notion of empowerment and 'losing' to the user. That would be achievable by reducing the student's dependency on his architectural personality and his personal accumulated knowledge; instead, in solving design problems, throughout different studio disciplines, the student should be directed towards understanding the users' needs desires and powerful contemplation of his context.

Therefore, the studio works should be engaging at different levels to be engaging real life community based problems, to train the student to approach the user, and building his knowledge on letting go to the user rather than his personal architectural ego.

8.2.2 Economical-Social Shifts Awareness:

The society is in ever-changing economic and social shifts, that affects the desires and expectations of the user. The architectural education stream should be directed to monitor, observe and engage these shifts throughout different fields of courses. This understanding should be sensitively interwoven in all disciplines of the education to turn to be a fundamental base for the practice.

8.2.3 Interdisciplinary Co operation

The architect as professional has always been loaded with responsibilities over his normal capabilities. Due to the complexity of the problems to tackle, the architect is expected to be a generative practitioner with the ability to performing various disciplines away from his core abilities. Interdisciplinary practice becomes necessary, and it is important to expand the idea of the discipline to incorporate skills and theory from other disciplines related to process, to support the ideas of "coproduction." .In the process of co-production it is crucial to shift from a focused problem solving to a broader problem-posing external to the immediate architectural discipline. A focus on process would help to counteract the current trend towards narrowing and specialization. (Glyphis.2001)

The Architect as a citizen or a professional is playing a key role in the sustainable development of the society and community, and his responsibility revolves around his ability to engage the society and the surrounding users, rather than the pure dependency on his knowledge and hubris practice.

REFERENCES

- Stephen McKenzie, (2004). Working paper series, no 27. *5. Social sustainability: towards some definition.* Hawke research institute, university of South Australia, Magill, South Australia.
- *United Nations World Commission on Environment and Development*. (2000).
- Model of social sustainability. *Western Australian Council of Social Services (WACOSS)*. Retrieved from http://www.wacoss.org.au/downloads/socialsustainable.pdf
- (n.d.). Home Page | Hatch Mott MacDonald. *Sustainability | Hatch Mott MacDonald.* Retrieved from http://www.hatchmott.com/expertise/sustainability
- Dr.Marie Thynell,. (2008). *6. Socio-Cultural constructions of sustainable mobility and their role in political and practical initiatives in Sweden*. Sweden: University of Gothenburg.

- Liam Kavanagh, . (2013). *7. Social Sustainability & High Density Development*. PIA Queensland Conference Paper.
- Mohamed Mosaad Elshafei, (2014). *8. New cities revivalism, the case of burg alarab new city* (Vol.). Alexandria: Arab academy for science, technology and maritime transport, college of engineering and technology department of architectural engineering & environmental design.
- Barton.H. (Ed). (2000). *Sustainable communities: the potential for eco - neighborhoods*. London: Earthscan publication.
- Sant , C., & Vale, B. (2009). *The roles of architects in sustainable community development* (Issue 3 ed., Vol. 6). Journal of architectural / Planning Research and Studies, Faculty of Architecture and Planning, Thammasat University.
- John P. Glyphis. (2001). *How Can the Architect Contribute to a Sustainable World?* Proceedings of a conference at Wingspread Conference Center, Racine, Wisconsin.