

## EDITORS WORD

## Relevance and Extent of Ecological Architecture

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### 1. Introduction

The definition of ecology itself and the homocentric nature of architectural design, urban planning, and landscape architecture (Thompson 2007) show us that sustainable design cannot be limited with site reclamation and renaturalization or seeking just to minimize or eliminate the harm to the environment without considering cultural, aesthetic, psychological, social, economic and other issues. Today we observe the trend of merging the concept of ecology with the human sphere. Actually, the ideas of differently merging the ecological concepts with human life had emerged with the start of the 20<sup>th</sup> century. Take for example urban ecology, cultural ecology or ecoaesthetics. The nowadays widespread concept of sustainability encompasses multiplicity of fields and dimensions and allows us analyzing in its frame not only the issues of ecology, but also of social, cultural, and economic sustainability in the areas of architecture, urbanism, landscape architecture, territorial planning, heritage preservation etc.

### 2. Conference “Ecological Architecture”

In order to provide the possibilities for dissemination, discussions, and questioning of these sustainability ideas in different spheres and searching for the links between them, scientific and popular events of various levels are welcome. International scientific conference “Ecological architecture”, which is organized by the Department of Architecture and Land Management of Kaunas University of Technology, is one of the first periodically organized scientific conferences in Lithuania providing the forum for discussions of the applications of principles of sustainability and ecological ideas in the fields of architecture, urbanism, landscape architecture and other areas concerning management and formation of environment. As the concept of sustainability, at least in theory, becomes the dominating paradigm of development of societies and environment and the ideas of ecological lifestyles and environmental preservation become widespread. The aim of the conference – to link aesthetic, psychological, local identity and technological aspects of sustainable and ecological design in different

areas – is undoubtedly relevant for Lithuanian and regional development of research and studies.

The conference “Ecological Architecture” has a prehistory, which also illustrates the gradual entrenchment of the ideas of sustainability in the discussions and research of architecture and related areas. The Department of Architecture and Land Management starting from the year 1995, when the studies of architecture were reestablished in Kaunas University of Technology, organizes scientific thematic conferences aimed at discussing relevant questions of architecture, urbanism, and land management. During the last conferences the relevance of the application of the principles of sustainability became evident: in 2007 the conference was held under the title “Developing and Developed Landscape” and was aimed at discussing the interdisciplinary aspects of landscape development; in 2008 the conference was entitled “Problems of Horizontal and Vertical Urban Development” and was devoted to the problematic of compact cities and urban sprawl; in 2009 the conference was organized under the title “Ideas of Sustainability in Architecture and Territorial Planning”. Starting from the year 2011, this conference, periodically organized by the Department, gained the permanent title of “Ecological Architecture” reflecting the contemporary trends and the status of the international conference. The researchers from France, Latvia, Poland, and scientists and practitioners architects from Lithuanian science and study institutions participated in the first conference “Ecological Architecture” held in 2011. Starting from the year 2011, the conference is held every second year in rotation with international scientific conference “Advanced Construction” organized by the Faculty of Civil Engineering and Architecture of Kaunas University of Technology. In order to get closer to general public and professional community, this year conference “Ecological Architecture” was organized as a part of Kaunas Architecture Festival, which took place in the city of Kaunas in September and October. The festival was dedicated to waterfronts: historic cities and their links with rivers. Thus “Ecological Architecture” in 2013 was also dedicated to city center revitalization, city and

water, landscapes and water. Other topics of presentations, including the application of the principles of sustainability and ecological design to architecture, planning, and construction, critical approach to principles of sustainability and ideas of ecological design, influence of sustainable and ecological design on expression and development of contemporary architecture, digital design for sustainability etc., were also welcomed. The researchers from Poland, Greece, Estonia and Lithuanian science and studies institutions had participated in the conference including the invited speakers Prof. Friedrich Kuhlmann and Jekaterina Balicka from Estonian University of Life Sciences, Prof. Andrzej Tokajuk from Białystok University of Technology, and Prof. Anna Januchta-Szostak from Poznań University of Technology. Comparing with the previous conferences organized by the department including the “Ecological Architecture” of 2011, it can be noted that the array and the understanding of the topics have expanded from the green roofs and straw bale houses to the flood management and sustainable urban drainage systems, cityscape and identity, sustainability and globalization, critique of the idea of ecological architecture, cultural heritage and sustainability, sustainable rural-urban interface.

The website of the conference with the conference program, the book of abstracts, some photographs and general information can be accessed using the following link: <http://ktu.lt/saf/turinys/international-conference-ecological-architecture>.

### 3. Review of articles

The present issue of the Journal of Sustainable Architecture and Civil Engineering mainly publishes the articles further elaborating the topics discussed during the conference “Ecological Architecture”: heritage preservation and sustainability, sustainability and globalization, city and water, sustainable rural-urban interface.

**3.1. Heritage preservation.** Sustainability has strong temporal and intergenerational dimensions that are underlined in its definition (Throsby, 2002). Evaldas Ramanauskas and Liucijus Dringelis in their article “The Inheritance of the Soviet Period: should It be Evaluated?” discuss the Soviet experience in landscape formation and settlement planning and the need for its present evaluation. They note that some features of urban and rural settlements, designed during the Soviet period, today could be attributed to sustainable urbanism: systematic approach, integrity, assessment of natural conditions, sensitivity towards community needs, attention towards public spaces, and, especially, green areas. The authors maintain that the legacy and experience of the Soviet era should not be wasted. They also note that “...in order to save the country’s residential construction experience, as well as maintain the historic urban diversity, it is important to evaluate planning and design work of the residential areas, which was carried out during the 50-year period.” This is especially relevant today, when we see the tendency to forget the Soviet era researchers, planners, their accomplishments and to see the documents accumulated in archives as mere curiosity, considering these works irrelevant for the present day,

because they were implemented under different ideological and economic system.

The theme of the urban legacy of the past and its present day preservation and use issues is continued in the article by Katarzyna Hodor and Julia Klimek entitled “Attempts and Methods for Revitalizing the Centers of Small Localities. Selected Examples”. The article deals with renovation, revitalization, and management of small urban settlements in Poland and presents two different examples - the village *Stary Paczków* nearby Opole rich in cultural resources and small town *Zabierzów* in southern Poland nearby Kraków under pressure for rapid change and development – which allow authors to showcase different methods of analysis and management proposals aimed at preserving local identity and heritage and at the same time improving the quality of life for inhabitants. The article underlines the importance of such actions: “...the risk associated with the loss of individual landscape features of small towns may be irreversible and may lead to the loss of tangible and intangible landscape values.”

In the practices of landscape architecture, architecture, and urban design it is crucial to understand that the concept of “empty space” does not exist and we always have some kind of natural and cultural context (Stauskas 2009). Domenico Chizzoniti, Letizia Cattani, and Luca Preis in the article entitled “The Memorial Museum of Jewish Culture in Prague. An Example of Urban Regeneration” present the methodology and the alternative proposals for the intervention in the historic urban fabric of Prague. The box-like modernist design proposals in the historic fabric could be discussed; however, two useful principles can be undoubtedly drawn from this research: the thorough analysis, good knowledge and appropriate interpretation of local history; the design principle of elaborating different alternatives that afterwards could be reconsidered and may point to their synthesis or to radically new design proposals.

**3.2. Sustainability and globalization.** Local identity is crucial to social, cultural, and even economic sustainability. The question of identity faces new threats and new development trends under globalizing forces. Giedrė Gudzinevičiūtė-Vilkelė and Evaldas Ramanauskas in their article entitled “The Impact of the Specific Elements of Globalization on the Spatial Structure of Lithuanian Towns and their Valuation” analyze the problem of consumer culture and its architectural manifestations in the townscapes of small settlements in Lithuania. They underline the negative impact of uniform functionalist architecture of large shopping centers, compare them with standard housing schemes of the Soviet period, which today pose many problems in the countries of the former Soviet bloc. They propose the way of compromise: the uniform logos of commercial institutions would represent the recognizable globalizing trend but the adaptive re-use of the existing buildings should be favoured instead of new construction.

**3.3. City and water.** One of the major focuses of the conference this year was city and water. Several articles dedicated to large and small scale water management projects and experience are presented in this issue of the

journal. Their topics range from the influence of water on city's identity to concrete examples and design proposals.

In the article "The Role of the River in the City Centre and its Identity" Justina Mačiukėnaitė and Ingrida Povilaitienė focus on Lithuania and on the role of the rivers in the historical development and present identity of the cities, although they touch some European examples in order to show that the enhancement of the water in the cityscape and the maintenance of local identity can be achieved both by large scale interventions (as in the case of Arhus) or just changing the attitude towards the river (as in the case of the Urban "beach" in Paris).

According to J. Stuart-Murray (2007) in landscape architecture "More recently, perhaps because of the growing incidence of unpredictable weather patterns, which have led to increased frequencies of flooding, concerns have turned to the management of man-made hydrology. Most sustainable urban design and landscape architecture is now typified by articulations of best practice in sustainable urban drainage systems." The research by Anna Januchta-Szostak presented in the article "Multifunctional Riverside Buffer Parks – the Research on Nature-Urban Revitalisation of River Valleys" is the example of several trends of contemporary sustainable landscape architecture and environmental management: revitalization of urban river spaces, flood management, riverside buffer parks. The comprehensive study presents the evaluation of riverside revitalization projects with the system of criteria, the methodology for creation of riverside buffer parks, and the application of the research outcomes and guidelines in the design of park in Poznan.

Niki Manou-Andreadis and Maria Milona in the article "Water Designing for Sustainability, Purity and Comfort" discuss the historical and architectural-urban relevance of water in human living environment and underline water's significance in development of tourism facilities. The authors present five realized examples of their small-scale

water designs in recreation institutions in Greece, discuss their environmental, psychological, aesthetic, social benefits and the links with historic tradition.

3.4. *Rural-urban interface*. Simona Basilico, Patricio Eduardo Enriquez, Massimiliano Bevacqua, and Fabio Villa touch a very important issue of rural-urban interconnections in their article "Agricultural Land into the City: 5 Environmentally Sustainable Ecological Parks". As an opposition of the urbanization of the countryside they propose some naturalization and "ruralization" of the abandoned and faceless urban areas in the city of Vigevano (Italy), which, after proposed interventions, would have not only ecological, but also social recreational and educational benefits.

The mentioned above articles confirm the attitude maintained by the conference "Ecological Architecture" that sustainability in architecture and related fields can be approached from many different points of view and, simultaneously, the common, integrating points can be traced. It is possible to conclude with the words of Niki Manou-Andreadis and Maria Milona that "In a holistic view, sustainable architecture could be an interconnected network of natural and social systems that provides a diverse range of environmental, cultural and economic benefits."

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