# Experimenting Regional River Pattern as Landscape Corridors in Urban Transformation

Adnan Kaplan
*Ege University, Faculty of Agriculture, Department of Landscape Architecture, Bornova, İzmir, Turkey*

*You must collectively conceptualize the nature with its all aspects since it delivers ultimate decision upon the earth.*

*Dr. Asaf Koçman*
*Emeritus Professor of Physical Geography*
*Ege University, İzmir*

## Introduction

It is widely acknowledged that today's state-of-art cities are capable of acting as landscape systems within and beyond urban domain. In this context, river systems provide urban fabric with physical, ecological and social advocacy while addressing multiple challenges of rapid urbanization and its resultant effects such as dense and uncontrolled urban development.

Based on the aforementioned statement, this paper enunciates the attachment of regional river pattern (particularly composed of Meles Delta and Bornova Rivers, and their association with natural and urban patches) with centrally located, yet large tract of İzmir metropolitan city (Fig. 1).

## Method

The subject has been conceptualized in graduate project studio at Landscape Architecture Program, Ege (Aegean) University, İzmir. It primarily demonstrates regional river system as a suite of blue- and greenways. And the system will then become the backbone for urban transformation and comprehensive ecological network, instead of a series of, but isolated canal systems exposed predominantly to challenges of urban density and water contamination. By the same token, such scheme will consistently be put in place to support and sustain the linkage from urban fringe through urban CBD and to İzmir Bay.

The studio theme basically came out from inefficiency of prosaic and mismanaged urban planning and design practices in responding to multilayered challenges of urban development in 'region-rural and/or urban' transect. The hypothesis that the project studio was embedded into is how to develop new ways to constitute or adapt a consistent regional river system as landscape system into the urban transformation process so that the river pattern

along with more livable and multifunctional urban ecosystems will be secured. So, the pattern may have employed to lead (water-based) urban revitalization process. Now that ecologically well-thought system will be able to increase adaptive capacity and resilience of urban geography against a number of internal and external problems.

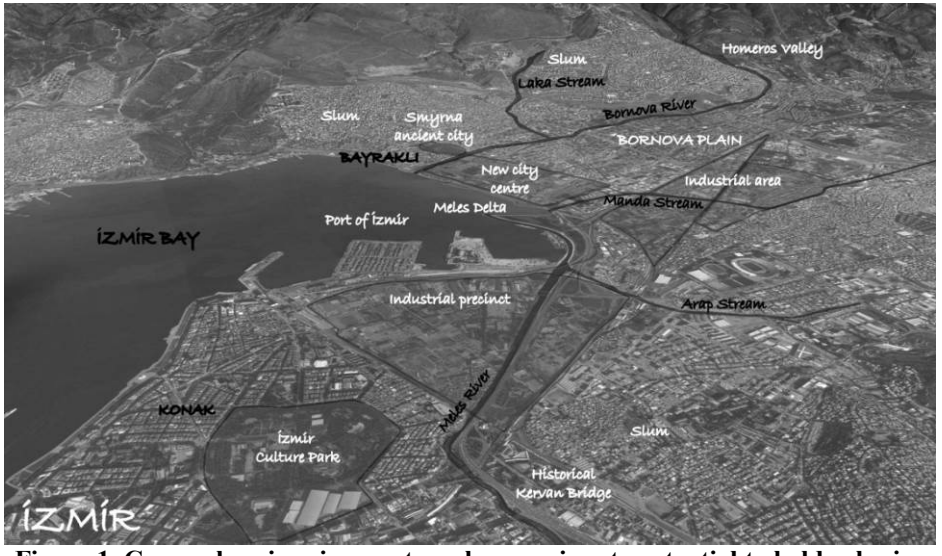


**Figure 1. Comprehensive river systems have an innate potential to hold cohesive linkage between different urban regions, and to recuperate blue- and greenways across the urban fabric**

In fact, arbitrary and uncontrolled urban development procedures have since early 1970's converted the region's natural features, traditional lifestyle and agricultural lands into commercialized and marginalized realms. Thus urban development regimes have to date casually disconnected once-established physical and ecological linkages and traditional life experiences between regional, urban and local landscapes, and disregarded natural traces of urban community that may have been the major source for devising a series of urban revitalization scheme. These all have dramatically changed over time the natural properties and physical structure of river systems into the canalized system that solely discharges the effluents down into İzmir Bay, regardless of maintaining any region/urban-wide ecological service.

With these all in mind, the rationale of this work has been outlined in Fig. 2. And the river pattern makes use of the 'region through urban' transect and (water-based) urban transformation to sophisticatedly claim an overall system of blue- and greenways and their engagement with regional and urban geography.

In structuring the studio framework as well as the rationale of the regional river pattern, some selected references featuring sub-themes of the paper were extensively used below;

- Case study: Koçman (1991)
- Region-urban transect: Jencks (2004), McHarg (1995), Spirn, (1984)
- Riverscape, blue/greenway: Baschack and Brown (1995), Chee (2012), Kaplan et al. (2013), Prominski et al. (2012), Vlug et al. (2013)
- Landscape infrastructure: Bélanger (2009), Mostafavi and Doherthy (2010),
- Urban transformation: Condon and Proft (1999), Kaplan and Velibeyoğlu (2016), Meijer et al. (2005)

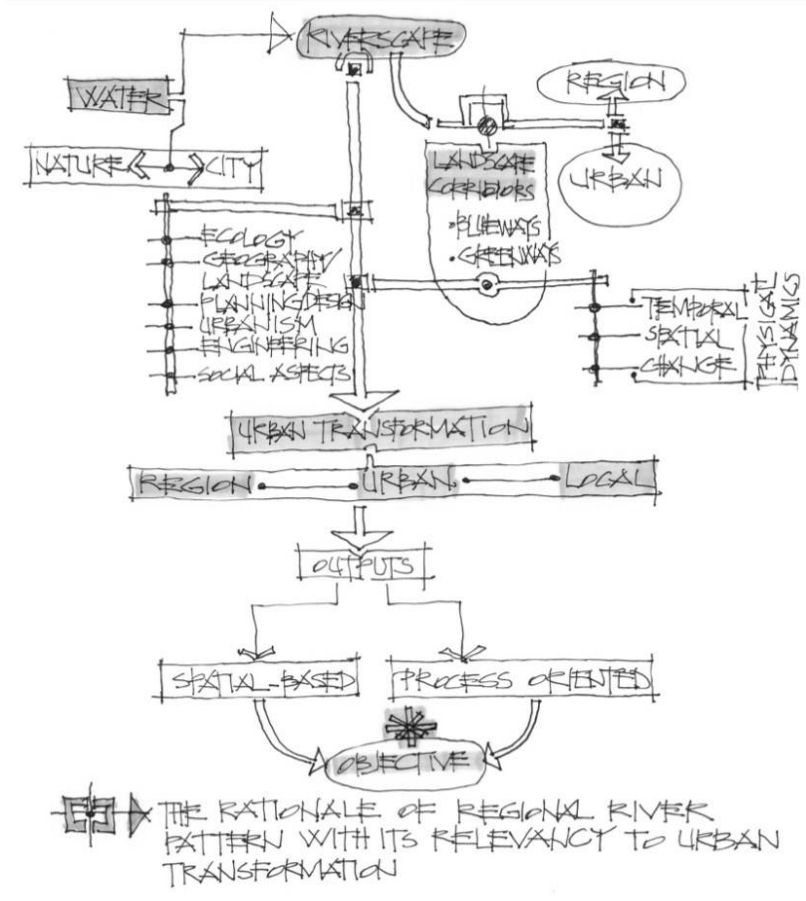


**Figure 2. The rationale of the paper**

**Results**

The studio introduces regional, urban and site-specific objectives that would afford to hold sway over a myriad of ecological, spatial, engineering and social challenges. With an emphasis on Bornova River, Meles Delta and their tributaries, it reflects the way of multifunctional design aspect (including coastal development, climate change effects) in conceptualizing urban transformation and 'urban centre to the outskirt of İzmir' sequence. Thus the studio is concerned with the river system and its place attachment within the context of regional landscape and urban communities of different nature (Fig. 3 and 4) (*Excerpt from the Syllabus of Joint Project Studio, 2016*).

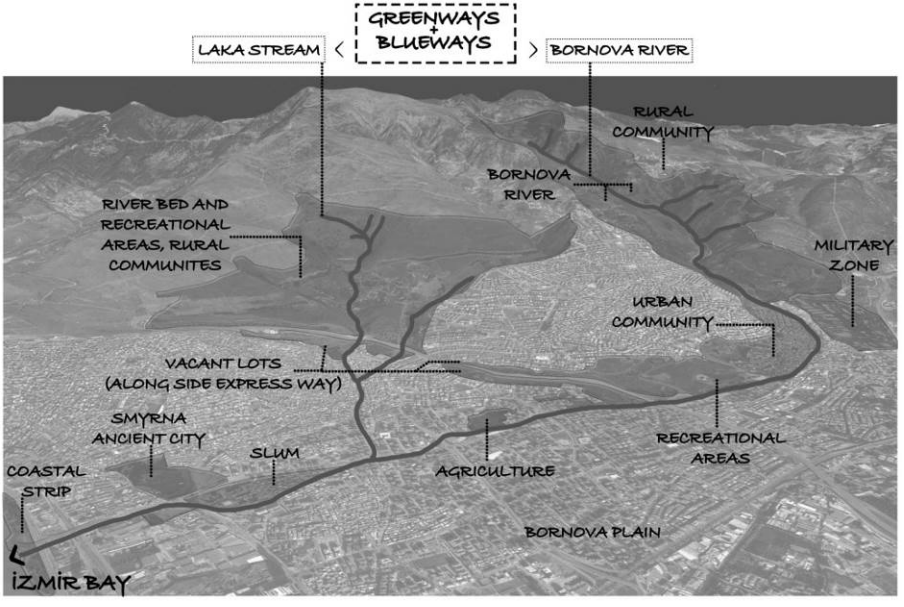


**Figure 3. Regional river pattern composed of Bornova River, Laka Stream and their relation with nature and urban patches**

In applying the river system into the projected areas, natural and cultural traces of the past as well as actual situation will support the content of sound landscape corridors that would be able to build some cohesive linkage between İzmir Bay-urban settlements-rural communities within regional landscape context. And future proof green-blue network would recuperate the devastated physical, ecological and social dynamics of urban domain. Amid these all, urban revitalization tool now in the agenda of the city will be harnessed to embrace brownfields, post-industrial sites and slums within the system. Market-driven urban development and its resultant effect 'gentrification' would otherwise seize upon urban configuration.

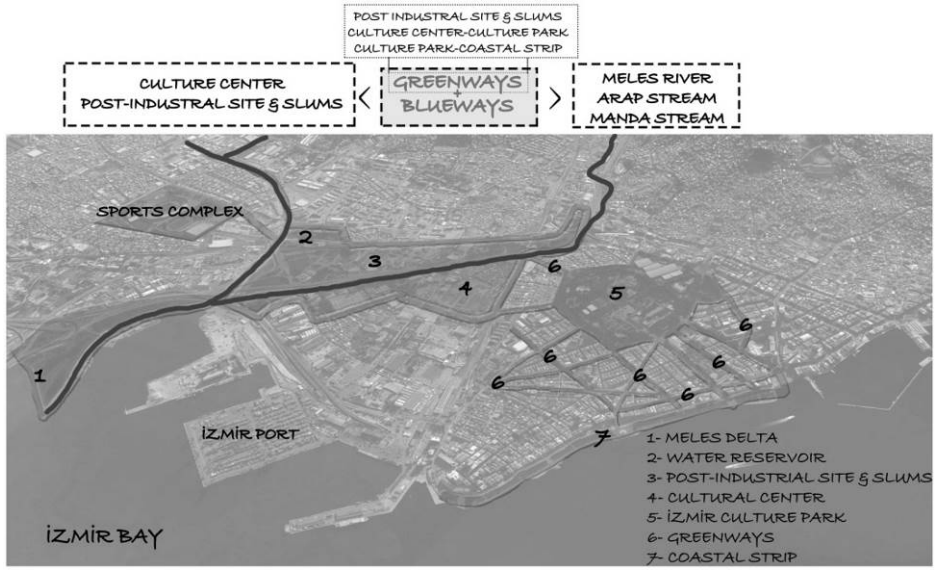


**Figure 4. Meles Delta and its engagement with the streams and central quarter of the city to complement a substantial landscape system**

## Conclusions

This work now stands at the nexus of developing new ways to conceptualize regional river pattern and running interdisciplinary and experimental project studio. It will comprehensively underpin the content of urban transformation within the region-urban transect.

Rather than transforming the whole region to construct the pattern, the work basically describes projected areas in particular that will provide with the entanglement of blue- and greenways to constitute comprehensive landscape system in both regional and urban context.

It is envisaged in the studio that Bornova River and Meles Delta as the hub and/or skeleton of the central region (Fig. 3 and 4) have evidenced that the river pattern based urban transformation emerges positively to gradually change physical peculiarities and socio-ecological dynamics of the city.

## References

Baschak, L.A. R.D. Brown (1995). An ecological framework for the planning, design and management of urban river greenways. *Landscape and Urban Planning*, 33, 211-225

Bélanger, P. (2009) Landscape as Infrastructure. *Landscape Journal*, 28(1), 79-

95.
Chee, T. (2012). *Olmsted Scholar Feature: The Los Angeles Riverscape-An Urban Estuary* (https://lafoundation.org/news-events/blog/2012/07/23/osp-tina-chee)
Condon, P.M., J. Proft (1999). *Sustainable Urban Landscapes: The Brentwood Design Charrette*. University of British Columbia, British Columbia.
Jencks, C. (2004). Nature talking with nature. *Architectural Review*, 215, 66-71.
Kaplan, A., K. Velibeyoğlu (2016). *Syllabus of joint project studio (UD502 and LPD548)*. İzmir.
Kaplan, A., K. Velibeyoğlu, Ç. Kılıçaslan, M. Özeren, İ. İnce (2013). Revisiting urban brownfield regeneration and beyond within the lens of green infrastructure-based design and management. In Fábos, J.G., M. Lindhult, R.L. Ryan, M. Jacknin (Eds.), *Proceedings of Fábos Conference on Landscape and Greenway Planning 2013: Pathways to Sustainability*. University of Massachusetts, Amherst, April 12-13, 2013, Department of Landscape Architecture and Regional Planning, University of Massachusetts, Amherst, Massachusetts, 109-117.
Koçman, A. (1991). İzmir'in kentsel gelişimini etkileyen doğal çevre faktörleri ve bunlara ilişkin sorunlar (Natural environment factors and challenges upon urban development of İzmir). *Coğrafya Araştırmaları (Geographical Research)*, 3, Ankara, 101-122.
McHarg, I.L. (1995). *Design with Nature* (25th Anniversary Edition). Wiley, USA.
Meijer, M., M. Dubbeling, A. Marcelis (Eds.) (2005). *Sustainable Urban Design: The Next Step*. Blauwelruk, The Netherlands.
Mostafavi, M., G. Doherthy (Eds.) (2010). *Ecological Urbanism*. Lars Müller Publishers, Baden.
Prominski, M., A. Stokman, S. Zeller, D. Stimberg, H. Voermanek (2012). *River, Space, Design*. Birkhauser, Switzerland.
Spirn, A.W. (1984). *The Granite Garden: Urban Nature and Human Design*. Basic Books, USA.
Vlug, J., A. Noortman, R. Aben, B. Mull, M. Hendriks (Eds.) (2013). *The Need for Design: Exploring Dutch Landscape Architecture*. Van Hall Larenstein University of Applied Sciences, Velp.