

## Chapter 4.11

# Eco–Municipalities and Municipal Applications for Sustainability

Seda H. Bostancı  
Okan University, Turkey

### ABSTRACT

*Climate change effects, losses in natural environment, limited and diminishing energy sources are great threats for the countries in ecological and social aspects. In recent years some districts in Istanbul have been badly affected by disastrous floods. Climate change might have taken part of this problem but the main reason for the case is shanty housing, and poor location of settlements nearby to riversides, and even within riverbeds. All those experiences increase the necessity of the ecological planning for the settlements and of applying the Eco-municipal model for creating healthy environments. While some phenomena provide against the sustainable development of Turkish cities, solutions will be found in projects with ecological background.*

*The eco-municipality models and municipal applications for sustainability are criticized for not yet finding a sustainable development model for Turkish municipalities. In the improvement of the sustainable municipality concept, some common decision had been taken and defined the related standards. LA21, EMAS for municipalities, and ISO standards are the examples coming forward. The methodology is based on literature review of experiences of the eco-projects that have been made in municipalities and SWOT analyses for these projects. In Turkey, the first step has been taken in LA21 processes to adopt the eco-municipal approach in transformation. For the further steps, the need for establishing an integrated model among the different applications has been concluded.*

DOI: 10.4018/978-1-4666-0882-5.ch4.11

## INTRODUCTION

Eco-municipality is a municipal model for finding long term solutions in a participatory process for the community. The model is based on innovative municipal management system. Eco-municipality can be defined as ecologically, economically, and socially balanced, healthy community for continuous development. The term justice city is based on social justice and democracy. Additionally; ecological justice became a major key of that concept. A sustainable development is a kind of development which meets the needs of the present generations without compromising the ability of future generations to meet their own needs. Municipalities are the decision making organs for planning the urban districts and areas. So they are the main actors in the development process of the city. To balance among sustainability, ecology, sociability and justice, municipalities have the main role in collaborating among with the universities, government units, NGO's and inhabitants. And the private sector should also be given a financial role in sustainable municipal applications.

"The world is facing energy supply challenges. Rising prices and finite reserves of fossil fuels, combined with necessary reductions in their use in order to mitigate anthropogenic climate change, will dramatically reshape the future energy supply. Among the greatest contributors to greenhouse gas emissions are the energy systems that power transportation, heating and cooling and industrial processes. It is imperative that energy planning is sustainable, secure and effectively implemented for local development" (Cassidy & others, 2007). "Beyond good planning and carbon-free technological solutions, the post-modern sustainable city should also be a well-organized place with low unemployment, social equity, green open space, social interaction platforms and universal education with provisions for basic needs" (Sukhdev, 2009).

"The Climate Group, along with a group of major international financial institutions, launched

The Climate Principles in 2008. Adopting the Climate Principles means making a commitment to:

1. Minimize operational carbon footprint,
2. Make business decisions that will reduce climate change risks and allow the development of climate-change related opportunities,
3. Develop products and services that enable customers to manage climate change related risks and business opportunities,
4. Engage with customers, suppliers and wider society to seek opportunities for a low carbon economy,
5. Support the development of sound energy and climate change policy and
6. Disclose progress against these commitments" (The Climate Group, 2010).

The planning process in municipalities has been changing from physical planning system to participatory planning system. Before the last decade, the experts of urban planners and designers were doing the planning with less participation of the agents, but now, it has being changed to gather all contribution of public and private sectors and inhabitants for creating universe of ideas. So, participation of the actors to urban planning process become equal, for a creating a livable environment for all. Municipal applications for sustainability has wide range of studies such as, green city policies, renewable energy sources and their usages in urban areas, energy efficiency and standards, natural and cultural heritage, certificate systems and green dimensions in urban design, architecture and urban furniture. When those ecological applications by municipalities become the main aim for creating healthy cities, the local governments start to create eco-municipalities.

There are different eco technological tools the municipalities used. The main tools can be summarized as follows; using renewable energies in district areas of municipalities (Dincer, 2000; Reiche and Bechberger, 2003; Bruckner and others 1997), eco-technological models for waste

16 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/eco-municipalities-municipal-applications-sustainability/66150](http://www.igi-global.com/chapter/eco-municipalities-municipal-applications-sustainability/66150)

## Related Content

---

### E-Health Solutions in Rural Healthcare in the Mbaise Area of Imo State: Nigeria

Elochukwu Ukwanduand Sylvanus Iro (2013). *International Journal of E-Planning Research* (pp. 40-44).

[www.irma-international.org/article/e-health-solutions-in-rural-healthcare-in-the-mbaise-area-of-imo-state/78890](http://www.irma-international.org/article/e-health-solutions-in-rural-healthcare-in-the-mbaise-area-of-imo-state/78890)

### E-Civic Engagement and the Youth: New Frontiers and Challenges for Urban Planning

Kheir Al-Kodmany, John Betancurand Sanjeev Vidyarthi (2012). *International Journal of E-Planning Research* (pp. 87-104).

[www.irma-international.org/article/civic-engagement-youth/70083](http://www.irma-international.org/article/civic-engagement-youth/70083)

### Reimaging, Rethinking, and Reinvigorating Planning Practices for Resilient Urban and Rural Development in Zimbabwe

Joseph Kamuzhanje (2023). *Handbook of Research on Managing the Urban-Rural Divide Through an Inclusive Framework* (pp. 321-338).

[www.irma-international.org/chapter/reimaging-rethinking-and-reinvigorating-planning-practices-for-resilient-urban-and-rural-development-in-zimbabwe/318257](http://www.irma-international.org/chapter/reimaging-rethinking-and-reinvigorating-planning-practices-for-resilient-urban-and-rural-development-in-zimbabwe/318257)

### Coupling Real-Time 3D Landscape Models with Microclimate Simulations

Lewis Gill, E. Abigail Hathway, Eckart Lange, Ed Morganand Daniela Romano (2013). *International Journal of E-Planning Research* (pp. 1-19).

[www.irma-international.org/article/coupling-real-time-landscape-models/76289](http://www.irma-international.org/article/coupling-real-time-landscape-models/76289)

### Modelling Urban Environments to Promote Ecosystem Services and Biodiversity: Case of Stockholm

Anna Kaczorowskaand Meta Berghauser Pont (2019). *International Journal of E-Planning Research* (pp. 1-12).

[www.irma-international.org/article/modelling-urban-environments-to-promote-ecosystem-services-and-biodiversity/230901](http://www.irma-international.org/article/modelling-urban-environments-to-promote-ecosystem-services-and-biodiversity/230901)