66 Columbia University Urban Planning Studio: Disaster Resistant Istanbul

BACKGROUND

In the spring semester of the 2001-2002 academic year, an International Urban Planning Studio was organized with the task of exploring sustainable urban planning and disaster mitigation processes for the earthquake prone metropolitan area of Istanbul.

Following the format established a year earlier for a similar study in Caracas, Venezuela, and preceding another study in Accra, Ghana, the studio was a partnership between the Urban Planning Program of Columbia University's Graduate School of Architecture, Planning and Preservation and the Center for Hazards and Risk Research at Earth Institute's Lamont-Doherty Earth Observatory. Additional collaborations were established with the Center for Disaster Management at Boğaziçi University in Istanbul and Columbia's Center for New Media Teaching and Learning.

The studio was comprised of eight urban planning, two earth sciences and one civil engineering graduate students from Columbia University as well as four graduate students and one instructor from Boğaziçi University. This interdisciplinary team was led by three instructors, two in urban planning and one in earth sciences. Additional assistance was provided from professionals and academicians in Istanbul

Istanbul is a city with a past unmatched by any other place in the history of civilizations, and it is still today a global center in its part of the world. Regrettably, it is located in a region that is earthquake-prone, and scientists expect another major event in the foreseeable future Responding to this situation, the International Urban Planning Studio was organized with the task of exploring sustainable urban planning and disaster mitigation processes for the earthquake prone metropolitan area of Istanbul.

OBJECTIVES

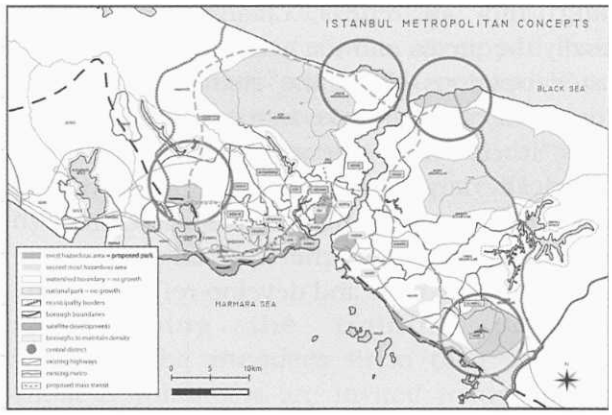
In addition to its pedagogic purpose of educating students through an actual multidisciplinary project, the studio's main objectives were to explore processes of planning for the metropolitan region of Istanbul and to develop plans and programs to achieve disaster-resistant or resilient urban conditions in the neighborhood level

ACTIVITIES

In order to achieve these objectives and to prepare for these tasks, the team traveled to Istanbul at the beginning of the semester in order to get acquainted with the study site and acquire necessary information and data In Istanbul, briefings were provided by faculty members from local universities. Meetings were held with various governmental and non-governmental agencies

To fulfill the studio's first objective, the first part of the studio addressed Greater Istanbul as an urbanized entity. Planning students explored the conditions above the surface of the earth such as development patterns and trends; transportation networks, demographic characteristics while the scientists investigated the underground conditions as well as the history of earthquake events and issues of overall risk and vulnerability

In order to develop a framework for the overall planning exercise, the studio team also discussed and identified a vision for the future development of the metropolitan area of Istanbul. On the basis of this vision, studio participants developed three different conceptual plans, centralized growth, satellite cities and conservation and prosperity plans. These were largely exercises to envision what the 21st century metropolis could be and while anticipating earthquake impacts The studio participants later combined the three conceptual plans to form a more comprehensive plan (see diagram)



With the intention of developing planning approaches that achieve disaster resiliency at the local level, the studio team selected three neighborhoods in Istanbul with different physical and socio-economic conditions. These neighborhoods address such concerns as differences in subsoil conditions, proximity to the primary fault, topography, as well as existing building stock, infrastructure, public services, open space and critical facilities The three teams analyzed these conditions and identified critical facilities that play an important role during and after a disaster emergency

ACHIEVEMENTS

As a result of this analytical work that combined the importance of disaster mitigation with the methods and principles of urban planning, actual programs that constitute a set of recommendations were identified and elaborated by the studio participants.
Further studio accomplishments included a project exhibition at the 2002 State of the Planet Conference and Columbia University representation at the American Planning Association's New York Metro Chapter Student Presentations

LESSONS

There is no pretense that work in an academic setting during a short time period can arrive at fully developed urban risk management programs, but every effort was taken to outline and structure the entire process and identify its components It is expected that previous and ongoing work by agencies in Istanbul in the same sector will support or complement the work of the Columbia studio, and certainly continue to expand, make more reliable, and implement the findings as they are developed.

FUTURE

The Studio work concluded that programs that progressively upgrade the building stock preclude the most dangerous situations and marshal resources for possibly needed rescue efforts are essential. Much work needs to be done at the local neighborhood level where earthquake impacts will be felt the most and the immediate rescue efforts will have to take place. The Columbia Planning Studio advocated the importance of establishing and maintaining a multilevel continuous effort that draws upon all resources – ranging from international assistance to principal responsibility by the national government and to efforts at the grass roots level It also established the foundation for continuing research into the methods and application of risk-conscious urban planning.

CONTACT DETAILS

Ebru Gencer
Studio Coordinator/Co-instructor
eag44@columbia.edu

Art Lerner Lam
Director
Center for Hazards and Risk Research
lerner@ldeo.columbia.edu

Grace Han
Assistant Director
Urban Planning Program
urbanplanning@columbia.edu

67 A Cooperative Hazard Impact Reduction Effort Via Education In Turkey

BACKGROUND

The Center of Excellence for Disaster Management, has been established in 2001 at the Istanbul Technical University under a memorandum of understanding with the United States Federal Emergency Agency (FEMA) ITU and FEMA carried out project ACHIEVE (A Cooperative Hazard Impact reduction Effort Via Education), a Disaster Management train-the-trainer educational project implemented according to an agreement signed in 2000 between the Prime Ministry of the Republic of Turkey and Federal Emergency Management Agency (FEMA) of U S.A .

OBJECTIVES

The aim of the Center of Excellence for Disaster Management is to carry out research and development projects in disaster management, and more importantly to implement educational programs at various levels (certificate, to masters degree) for those involved in all phases of disasters

ACTIVITIES

The center trains local and organizational officials for disaster management, who are employed as public or private officials required to work at disaster sites, officials working in local authorities, and emergency operations centers and architects, engineers, teachers and students All new techniques and knowledge regarding Disaster Management is conveyed by seminars and courses to the target groups listed above Currently, over 1100 officials have been trained throughout Turkey.

This center also cooperates with all Disaster Management organizations of the Prime Ministry of the Republic of Turkey.The long and short-term goals of the center are to train officials for disaster prevention and mitigation. Priority is given to emergency managers of relevant institutions and local authorities and secondly, public training programs are being carried out. The center organizes educational seminars on national and international levels and coordinates and implements research projects

The Center of Excellence for Disaster Management also initiated a graduate level education program, for professionals who are seeking a Masters Degree in Disaster Management. The graduate program is carried out in cooperation with the Oklahoma State University, and is a one-year degree program.The first classes began in the 2002-2003 academic year. The first graduates include a class of 13 professional disaster managers

ACHIEVEMENTS

■**Initiation of the first Degree Program in Disaster Management in Turkey**

A masters degree program was initiated by the Center at the Istanbul Technical University in 2001, with cooperation of the Oklahoma State University and Texas A & M University. The program is currently the only degree program in Turkey

■**National Emergency Management, Education and Exercise Implementation Program** – ***Sponsored by the Ministry of Interior, Republic of Turkey***

The goal of the project was to update, provide sustainability to the emergency management system of Turkey via the training obtained through the FEMA-_TU ACHIEVE Project. The project was initiated in 2001 and completed in 2003

■**The Restructuring of the Turkish Fire Brigades-** ***Sponsored by the Ministry of Interior, Republic of Turkey***

The objective of the project is to increase the efficiency and coordination of the fire services in Turkey by providing an integration of the fire services for disaster management and emergency rescue. The project was initiated in 2001 and completed in 2003.

■**Development of National Emergency Management Model-** ***Sponsored by the Ministry of Interior, Republic of Turkey***

The aim of the 'Emergency Management Model Research' is to provide the data that will be used to create an emergency management structure, which is appropriate for the conditions of Turkey. By examining other successful applications worldwide, the model

will be nationally and locally applicable, inclusive and contemporary. The project was initiated in 2001 and completed in 2003.

■**Development of an earthquake Master Plan for Istanbul-** ***Sponsored by the Greater Municipality of Istanbul***

18 Members of the CEDM took part in this 8 month project. CEDM took the lead role for Disaster Management and Public Education for the Mega-City of Istanbul

■**Training for local Governors for disaster Management-** ***Sponsored by the Ministry of Interior, and the Japanese Government (JICA)***

8 members of the CEDM trained all local governors of Turkey in Ankara for a two year project.

The following are the first Turkish books in the field of Disaster Management published by the CEDM at ITU:

No 1. Emergency Management Principles
No 2 Emergency Management Planning
No 3. Emergency Management Tools
No 4 Emergency Operations Center
No 5. Incident Command System
No 6 Handbook for Mitigation Principles
No 7. Mitigation Methods for Emergency Managers
No 8. Preparedness for Disaster Exercise Implementations
No 9. Exercise Development
No 10. Mobilization for a Disaster Resistant Community
No 11. Voluntary Resource Development
No 12 Media and Public Relations Principles for Emergency Situations
No 13. Community Emergency Response Teams (CERT)
No 14. Emergency Management Operations
No 15 Proceedings of the Workshop on The Restructuring of Turkish Fire Brigades under the light of International Experiences
No 16. National Emergency Management Model
No 17. Model proposal of the Restructuring of Turkish Fire Brigades
No 18 Emergency & Disaster planning guide for schools
No 19. Emergency Management Conference Reports Kocaeli 99, 16-17 January 2003 (CD)
No 20. Terrorist Attack on 15 and 20 November 2003 in Istanbul

LESSONS

The challenge that we faced as trainers and educators, was difficulty initiating new systems in disaster management which therefore required support from the local leaders (Mayors and Governors) and the Central government. Upon being able to initiate our efforts with their strong support, we were able to conduct our courses with high levels of attendance. Having leaders with strong disaster management backgrounds will enable sustainable growth, and minimal losses in future disasters The key is to have a sustainable educational system with certificates that have to be renewed after a period of time.

FUTURE

■Initiating an accreditation system for educational programs in Disaster Management.
■Creating regional Centers of Excellence for Training and Education

CONTACT DETAILS

Derin N. Ural, PhD

Director, Center of Excellence for Disaster Management
Istanbul Technical University
Maslak, Istanbul
Turkey

Phone: +90 (212) 285-3742
Fax: +90 (212) 285-6335
derin@itu.edu.tr
www.aym.itu.edu.tr