

# Capacity Building for Pakistan in Fire Risk Management

## Partner Agencies:

Higher Education Commission (HEC), Pakistan  
United States Agency for International Development (USAID), USA

## Investigators:

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## Project Period: 3 Year (July 2013 – June 2016)

The urbanisation of big cities has increased many folds in the developing countries owing to a rapid population influx. The development process, which is triggered by this rapid population growth, prompts various types of construction in order to cater for the needs of this population. Commercial, industrial and residential buildings typically constitute a significant proportion of the overall construction. Historically, these are very vulnerable to several possible hazards like earthquakes, floods, high winds, fire, etc. However fire is considered one of the biggest threats to both the building occupants and its contents.

Civic agencies in Pakistan lack any preparedness to deal with the aftermath of fire in a building. As a typical example, the cases of fires in Ali Enterprises (a garment factory) in Karachi and a shoemaking factory in Lahore in September 2012 can be presented here. These factories caught fire on 11 September 2012; these are considered to be the worst incidents of industrial fires in Pakistan's history. More than 300 people died and 250 people were injured due to these incidents. One key challenge in mitigating fire hazard in Pakistan is the absence of studies related to fire risk management and necessary mechanisms for fire damage assessment of buildings. This research addresses this gap in the knowledge and deals with an urgent need of communities in Pakistan.

## Objectives and Scope

This project is aimed at capacity building of academia, public and private sectors in Pakistan and at technology transfer in the area of fire risk management. The objectives of the work are as follows.

1. Carryout a fire hazard and vulnerability analysis to evaluate risk to communities in Pakistan (Figure 1).
2. Compilation of extensive literature of models related to post-fire assessment of building structures prevalent in the developed world and adapting these in an incremental fashion depending on the existing expertise. Implementation mechanisms of adapted models will be developed in order to get a complete picture of fire affected regions of the building.
3. Establishment of thermal properties of local construction materials.
4. Developing standards for monitoring thermal properties of materials at elevated temperatures.
5. Development of a curriculum at post-graduate level for universities in Pakistan.

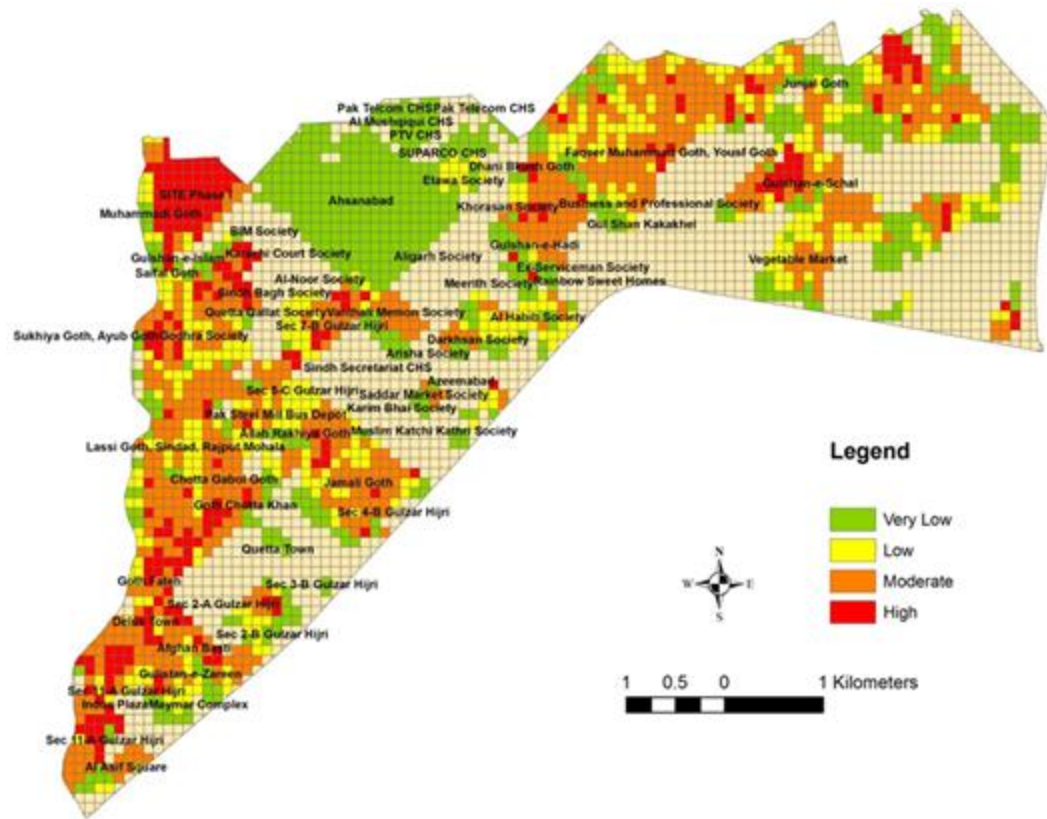


Figure 1: Example of fire hazard analysis