



FIRE HAZARDS AND FIREFIGHTING IN URBAN AND FORESTED AREAS

An overwhelming number of fire-related incidents in Pakistan have raised questions about the sustainability of Pakistan's urban and forested areas. Disasters stemming from crop fires, forest fires, and buildings catching fire have become a routine occurrence. The devastating wildfire in the Koh-e-Sulayman Mountain range in Baluchistan's Shirani District spread over more than 10000 acres of land and destroyed almost 40 percent of the trees, contributing to loss of biodiversity, innocent lives. And countless livelihoods. Subsequently, an acute shortage of fire protection infrastructure in Pakistan's major urban centers poses a serious risk to socioeconomic activities and human life. According to research, around 165,000 people are killed by fires every year in Pakistan, and as a result, 164,00 are injured or lose the ability to work.

Unfortunately, the scale of this threat is not fully recognized in Pakistan and recent fire incidents have resulted in considerable economic and life losses. Approximately 80% of the structures in Karachi do not have emergency exits in buildings. Apart from the fire hazards caused by human

activity, the prolonged heat wave and poor handling of climate change have also exacerbated the fire situation in the country. Recently, significant fires incidents have been reported in Islamabad, Swat Forest, Karachi, and Shangla District.



WEBINAR
22nd JUNE, 2022

SESSION OBJECTIVES

1. Obligations of an urban planner to ensure fire safety
2. Necessities of Urban Planning for Fire Safety in Pakistan
3. Modern trends in fire protection
4. Firefighting in urban and forested areas

VIEWS OF THE PANELLISTS



Mr. Taimoor Abbasi
Topic: Obligations of an urban planner to ensure fire safety

He is the co-Founder and Director of Propsure Digital Solutions, a digital transformation platform for the real estate industry of Pakistan. He has a master's in Urban, Community, and Regional Planning from NUST, with more than 15 years of experience in Urban Planning and the Real Estate sector. He has also worked with several public and private entities.

1. Firefighting should be taken as a profession by individuals on a larger scale in society. Interest in this profession can be generated through increasing awareness among the masses and highlighting the role of firefighting in the preservation of life, property, and society.
2. Tackling fire hazards from their root cause can greatly reduce the chance of fire-related disasters in urban areas. Residential areas in urban city centres are often located near industrial zones, increasing the risk of a fire hazard, and endangering the lives of nearby residents. This reflects a lack of proper urban planning in Pakistani cities and is a major cause of fire-related incidents.
3. Urban planners and local government and municipal authorities should prioritise land-use segregation and differentiation for improving fire

safety in urban areas. Most industrial and commercial sites are located very near residential districts. This increases the hazard risk from fires and also increases the chance of a fire disaster.

4. Measures should be taken to increase access to areas where there is no coverage. More than 95% of the area in Pakistan is rural and inaccessible to firefighting departments. District headquarters have some firefighting capabilities but areas beyond the municipalities do not have such facilities.
5. Only 5 per cent of Pakistan's land area is developed, which makes approximately 35000-40000 sq. ft., out of which only 3500-4000 sq. ft. is planned. With more than 90% of this developed area being unplanned, firefighters and trucks do not have the proper infrastructure to perform firefighting tasks efficiently.
6. Municipal corporations do not have the capacity and resources to control fires exceeding five floors in urban areas. This calls for immediate attention to building control laws and providing accessibility to firefighters by leaving space in buildings during construction for their movement.
7. Lack of implementation of building safety codes and bylaws is one of the biggest challenges. Firefighting codes and regulations are in the urban planning curriculum but are not followed in letter and spirit.



Mr. M Imran Taj
Topic: Modern trends in fire protection

He is a Member of the Institution of Fire Engineers UK and the President of Fire Protection Association of Pakistan. He has several international certifications in the field of Fire Protection such as NEBOSH, NAPFIS, and Passive Fire CPD from South Wales Fire & Rescue HQ. He is also a certified fire prevention officer and has served as an advisor and consultant in a wide range of projects in Pakistan and abroad. He is also a trainer at the institution of fire engineers, UK.

1. Pakistan lacks fire safety engineers and professionals and most of the fire safety codes are copied from international top institutions. However, a lack of professionals keeps them from being implemented.
2. To ensure fire safety in buildings, several factors need to be considered during the construction phase. Provision of fire exits, implementation of building code of Pakistan, utilisation of fire protection systems, and their effective maintenance are some of the key steps which need to be taken to ensure protection from fire hazards.
3. The use of modern technology in fire protection is the need of the hour. Ensuring

access to fire safety for all is not possible without engaging monitoring systems and control centres that are well integrated within buildings and urban fire departments.

4. An important aspect of fire safety is fire containment. Use of fire resistant materials in construction, following of building codes for fire safety, installation of fire safety doors that stop the spread of fires, and installing manual fire extinguishers on every level of building are some measures which can be taken to ensure that fires do not spread beyond their origination point.
5. In most instances, casualties from fires are a result of exit paths being compromised, either due to people not knowing the location, or fire exits being locked due to security concerns. Fire alarm systems should be integrated with unlocking mechanisms in a building, where all exits should be made accessible.
6. Fire proofing and passive fire protection are some of the new technologies which need to be given importance as they offer built in fire safety and do not require manpower for firefighting.
7. Buildings must ensure that a fire and safety control room be established to monitor any instance of fire eruption. A timely initial response to fire eruption can greatly reduce the risk of a fire related disaster.



Zeeshan Alam
Topic: Necessities of Urban Planning for Fire Safety in Pakistan

He is an engineer by profession, having an agile career spanning over 18 years in the field of Fire and Safety Protection. His diversified experience in the industrial and commercial sector enable him to understand the distinct and specific hazard containing demands of each segment.

1. Lack of awareness, misconception among the masses, and absence of fire safety culture in society are the root cause of fire hazards. It is imperative that the society change these cultural norms and understand the impact of fire disasters in terms of life, property, and economic development.
2. Pakistan's urban infrastructure is void of fire safety mechanisms. A lack of resources and poor accessibility in unplanned urban areas add to the dire situation. The government must develop strategies to employ, train, and utilise local populations for firefighting.

Pakistan lacks organisations that advocate for a fire safety culture. As a result, people are not educated on the matter and do not feel empowered to act towards improving their fire safety conditions. Establishing such organisations can greatly increase awareness among the masses on fire safety issues.

4. Another major factor which impedes the development of fire safety mechanisms in public and private organisations is the limited budget allocated for this sector. It is observed that individuals and organisations also do not pay much attention to this critical sector and do not budget their funds accordingly. To ensure that no public or private sector organisation fails to implement strict fire safety laws, there should be a regulatory oversight on the provision of fire safety mechanisms.
5. Pakistan's cities require master planning on all levels. Development of new areas should encompass fire safety in urban planning. Regulations regarding fire safety must be implemented along with development of new out of the box solutions.



Mr. Saeed Akhtar Jadoon
Topic: Firefighting in urban and forested areas

He is the ex-Chief Fire Officer, Karachi Port Trust, and the Founder of Fire Protection Association of Pakistan. He is also the Patron in Chief of Rapid Safety Pvt. Ltd., a corporate training and consulting company that specialises in training, consultancy, and development for occupational health, safety, security, quality, and environment management. He has a combined experience of 39 years and is currently a professional trainer for a wide range of courses on fire safety.

1. An alarming number of fire eruption cases in Pakistan are being recorded. On average, there are 1 to 2 fire hazards per month and approximately 50 major fires annually. The impact of these fires is the highest in rural areas as only provincial and divisional headquarters have facilities to manage fires and rural areas have little to no safety measures. The government should consider providing protection to all inhabited areas of Pakistan.
2. Climate change is also a leading cause of increasing fire disasters in Pakistan. Prolonged periods of hot and dry weather exacerbate conditions that lead to forest fires as 6-8 forest fires are recorded every month in forests in Pakistan. Recently, 1.6 billion hectares of land, including 24 villages, were affected as the wildfire could not be controlled for eight days. The government must address the issue of climate change and its devastating impacts on Pakistan on priority and take measures to ensure that the loss of biodiversity and forested areas is managed.

Due to a high dependency on fire guards and a lack of advanced infrastructure to control forest fires, the number of forest fires has increased to 3 times per week. Even a small jungle fire destroys approximately 5000 trees, negatively impacting the environment. Land and timber mafias also exploit the situation to extract resources and blame the damage on forest fires. Providing trained personnel in fire safety and protection to all forested areas of Pakistan must be ensured.

4. Despite being successful in planting a billion trees, the human-to-tree ratio in Pakistan remains 5 trees per person as compared to 422 trees per person on average in other countries.
5. Many lives can be saved if the multi-storey industry is discouraged in Pakistan. Firefighters are not capable enough to access the higher floors in case of a fire hazard in vertical structures. The government must ensure that building bylaws are followed in this regard and overcrowding of space in urban areas is prevented.
6. As technology is advancing, human involvement is less needed in areas where automated fire systems are available. By adopting automation, fires can easily be contained in time rather than spreading to the whole area.
7. Insurance companies can play a major role in the development of a fire safety culture. Most people feel secure from fire hazards as they rely on insurance companies to cover costs in case of a fire disaster. However, it is the responsibility of insurance companies that they regulate fire safety measures and do not allow people without fire safety plans to avail their services.



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