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## Energy and Environment Pillar

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### **Buildings Construction and Maintenance Role in Urban Pest Management**

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#### Abstract

The major threats to community health were recognized as coming from poor housing, poor management of sewage and drainage, foul air in industrialized towns, unsafe drinking water, and inadequate control of pests.

Increasing pest infestation in urban areas is now a reality. The reliance on the use of chemical pesticides leads to negative results. Use of clean ecological methods must be the strategy of the future. Pests are attracted to our buildings to satisfy their needs which include food water and shelter. The development of building designs (green buildings), offers intriguing opportunities for use in future urban pest control by preventing pests from invading our buildings and enjoy the available food and shelter.

A survey was conducted including 150 houses in Rayyan municipality with the aim to investigate the buildings defects which play a role in pest infestation. The results revealed that more than 50% of the buildings inspected are having defects which attract urban pests to the buildings. These defects include the presence of unsealed electrical and water pipes entry points to the buildings, sewage water manhole defects, cracks and crevices, gaps between floor tiles, doors and windows gaps. More than 60% of the buildings have defects in sewage water manholes include broken covers, manholes not built according to the standard specifications. More than 90% of the manholes are not equipped with valves. The results also indicated buildings with defects are more likely infested with pests like cockroach and ants. House owners questioner, revealed that, 73% of them believe that chemical control is the best method of control and they don't think that sanitation and maintenance will reduce pests population.

It is clear from the results that construction and maintenance can be used as an important tool in urban pests management by preventing pests entry and survival inside our buildings.

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The survey results showed that effective pest management depends on more than just a skillful pest control operator because the conditions that allow the pests to have access to the buildings and satisfy their needs and requirements are under the control of other individuals for examples building designers, electrician, plumbers. Buildings managers , owners residence are also involved in the pests management program because sanitation is a major factor in the pest prevention program.