Geohazards and the urban ecosystem

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The urban ecosystem comprises the natural, built and human components. Urban ecosystems play an important role in nation building as urban-dwellers in developing countries are expected to contribute 80% of the Gross Domestic Product in this decade. Given their importance, better assessment and management strategies of urban ecosystems are required to stave off serious environmental problems due to rapid development. The prevalence and severity of environmental problems in an urban ecosystem are influenced by the structure and location of the economic activities within it, and certain problems can generally be linked to the level of wealth in this ecosystem, as reflected by the per capita income.

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Environmental problems that occur in the urban ecosystem are declining air and water quality, land pollution and increased frequency of geohazards, especially in developing countries. The higher occurrences of geohazards in developing countries is a manifestation of poor planning and many of these problems in urban areas are often exacerbated by human activities.

Uncontrolled development contributes to the occurrence of geohazards and have resulted in damage, loss of property and lives. The risk is increased when people knowingly or unknowingly settle in risk prone areas such as floodplains, unstable slopes and seismic fault lines, among others. Some of the recorded geohazards that have occurred in Malaysia are floods, erosion, landslides and subsidence. In the past five years, over 100 occurrences of floods and flash-floods, about 20 cases of river bank erosion and 20 cases of landslides, and at least 8 cases of subsidence have been reported in the Klang Valley alone. Planning responses to minimise the effects of geohazards is proposed utilising the newly amended Town and Country Planning (Amendment) Act, 1995 (Act A933) that has recently been enacted, and by provision of adequate geological information for planners and decision-makers.