

The Impact of Karst Structures on the Urban Environment in Semi-Arid Area

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Abstract : Urban development is often dependent on adequate land for expansion, except that sometimes these areas have vulnerability. This is the case of karst regions characterized by carbonate geological formations marked by the presence of cavities and cracks. The impact of climate variability in Cheria area marked by a growing shortage of rainfall, the impact resulted in the development of the vulnerability of these structures. This vulnerability has led to the appearance of collapse phenomena as well in both agricultural and urban areas. Two phenomena have emerged to explain the collapses, the first is assigned a filling process in the cavities, and the second is due to a weakening of the resistance that collapses limestone slab shear phenomenon. In urban areas, the weight of the buildings has increased the load on the limestone slab and accelerated the collapse. The analysis of the environmental process is in the context of our modest work, after which we indicate the appropriate methods for management policy of urban expansion. This management more preventive (upstream), much less expensive than remedial solutions (downstream) needed after the event and sometimes ineffective.

Keywords : Cheria, urban, climate variability, vulnerability karst collapse, extension, management

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