Doi:

The Need to Pay Attention to The Issue of Land Subsidence Risk in Important Scientific and Policy-Making Centers of the Country

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Letter to the Editor

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Dear Editor,

Las one of the most important geomorphological hazards, has reached unprecedented proportions in Iran in recent years. Official reports indicate that the subsidence rate in several plains of the country including Tehran, Varamin, Isfahan, and Kerman, exceeds several centimeters per year, placing Iran among the countries with the highest subsidence rates in the world (1& 2).

The importance of the issue is compounded by the fact that, unlike many natural phenomena, subsidence is mainly caused by human activities and over-extraction of groundwater. (3)

In addition to the irreversible degradation of aquifers, this phenomenon has wide-ranging consequences for urban and rural infrastructure, power transmission and communication lines, agriculture, and even food security (4).

If the current trend continues, it could lead to forced migrations and far-reaching socio-economic changes (5).

It is essential that the scientific community, in cooperation with executive authorities, recognize subsidence as a national crisis. Strengthening interdisciplinary research, creating integrated information databases, and revising water management and agricultural policies are among the key strategies to mitigate and control this phenomenon. Moreover, raising public awareness and ensuring community participation in water management can play a vital role in preventing the escalation of the crisis.

Nevertheless, it must be emphasized that academic studies and university-based research alone are not sufficient to resolve the subsidence crisis. Given the vast scope and socio-economic consequences of this phenomenon, sustainable financial resources, dedicated national budgets, and the establishment of capable executive bodies are urgently required to translate scientific findings into practical policies and actions. Only through this linkage between science, policy, and resource allocation can we realistically hope to curb the accelerating trend of land subsidence.

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