

Abstract

Water resources around the Middle East are under an enormous stress resulted from the population growth and the extensive use of water resources that exceeds the water demand of the countries. Moreover, climatic aspects pose another dimension of stress on water resources; it has significant effects on environment, societies and economics. In fact, the governance of these countries has the tendency of increasing this stress or decreasing it, depending on its performance and efficiency in applying policies, legislation and managerial plans towards decreasing the poverty and the vulnerability of the countries specially those suffering from poverty.

Vulnerability to the impacts of Governance and Climate aspects needs to be addressed to assess the impacts of climate in linkage to socio-economic and governance performance. this assessment is needed to identify the countries where the governance and the political conflict is likely to impact on human livelihoods and on water resources in the cases of any climatic changes and hence affecting the vulnerability of its country and the ability of these countries to cope with any sudden changes that may face them.

In this research, the vulnerability of countries was assessed by introducing a new management tool consists of indicators that are combined together to form an index that targets the climate and governance aspects. This index is called Governance and Climate Vulnerability Index (GCVI), it measures vulnerability of countries/communities relatively to each other in relation to water elated issues, taking into accounts social, physical and political aspects in order to outline an integrated structural framework. These aspects are represented in a variety of relevant components joined together as indicators using a comprehensive approach to form an integrated management tool. The index was tested and applied on five countries as study cases, which are Israel, Jordan, Lebanon Palestine and Syria. The index has formed a comparison tool of the vulnerability for these countries in terms of the governance and climate aspects in linkage to water.

The Governance and Climate Vulnerability Index (GCVI) focused mainly on water related issues that might be effected by the climate changes and affects the ability of countries to cope with these changes. This has been achieved by identifying the governance factors that impede the introduction of beneficial changes and recommend policies and systems for reducing vulnerability. These factors influence the ability of countries to adapt in case of any changes,

therefore, the GCVI introduced the governance aspects from which the adaptation strategies will be developed and applied to protect water resources and decrease the vulnerability of the country.

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