ABSTRACT

The under-taken research work includes the development of a risk-informed strategic planning approach for infrastructure sectors that is suitable for use in developing countries such as Palestine. The approach consists of five phases i.e., Phase 1: Preparation for Planning; Phase 2: Information Diagnosis; Phase 3: Strategic Choice; Phase 4: Implementation; Phase 5: Monitoring. This developed approach overcomes the limitations of other worldwide-recognized approaches to strategic planning when applied to developing countries. The approach numerically accounts for special conditions that exist in developing countries, especially in Palestine such as the high level of uncertainties and risks, political influence, external factors, etc. the approach also includes sensitivity, forecast and economic analyses, a decision making methodology and a monitoring process.

The practical use of the developed approach has been demonstrated through its implementation to the real life of Gaza City water sector case study. The first priority for investment within infrastructure sector in Palestine is water and wastewater including storm water. A number of plans for solving the problem of water in Palestine have been proposed and partially implemented in various areas including Gaza City. However, the problem of water still exists. In the developed approach an analytical hierarchy process has been used to prioritize three strategic planning alternatives against nine criteria envisaged suitable for Gaza water sector. The approach has successfully identified a strategic alternative that comprises of three components that address water, wastewater, and storm water development and management.