# Location Based Exploratory Decision Support Approach for Midwifery and Grama Niladhari Divisions in Hunuwala-North: Ratnapura District, Sri Lanka

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Spatial information is being used as a supportive component for the process of decision making in various disciplines and applications. Generally, the governing activities, facts of citizens and properties, and natural and man-made phenomena are associated with locations. In Sri Lanka, the smallest administration unit is the Grama Niladhari division, whereas the midwife is the closest health care person that the community encounters. Most of the time two divisions are overlapped with each other resulting that they collect common facts about citizens. All the data about villages or citizens collected by Grama Niladharies and midwives become the data sources to make decisions by the top-level officers. The main objective of this study is to develop a location based (spatial) decision support approach for multiple criteria decision model with geo-visualization for decision making officers in various government sectors such as divisional and district secretaries, top-level officers of healthcare sector and their upper administrative levels: Its architecture consists of three major components namely spatial layer, attribute layer and the criteria layer. Each attribute record is associated with at least one spatial record resulting to a geospatial database, which has citizen level data, with predefined rules and criteria compiled according to the administrative policies and healthcare rules and regulations of the government. A proof of concept is developed and tested with the actual data. Therefore, it is proven that the introduced approach has a significant effect for the decision makers to make cognitive decisions rather than emotional decisions.

*Keywords:* Spatial Information, Decision Support System, Geo-Visualization, Criteria, Attribute Layer