**State of the Art and Trends in Cancer Control and Prevention in Asia: Geospatial Science towards SDG 3.4**

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***ABSTRACT***

The scope of the subject of Geographic Information Systems (GIS) has risen far from mere production of maps to a multitude of interdisciplinary analytical scenarios like healthcare cum social sciences where environmental factors may have some direct or indirect impact on a disease in consideration. The United Nations (UN) has recommended framing health related policies with the application of GIS to achieve Sustainable Development Goals (SDGs) as it can help visualize the data which is difficult to understand otherwise. We know that healthy life and physical and mental well being of human beings as mentioned in the United Nations’ target SDG 3.4 is directly linked with the social, cultural and biological environment in which they live. GIS can aid in discovering the interlinks and implications such an environment may have on the incidence of a disease. This helps authors and institutions towards control and prevention of deadly diseases like cancer. While some developed countries like the USA have been using GIS for the last four decades reaching a peak in their cancer cases, most of the developing countries, are lagging behind in GIS application and also have been witnessing an alarming rise in the number of cancer cases year by year, thus far from their peak for their graph of cancer incidence and mortality. Therefore, this study is conducted to investigate the state of work done in geospatial analysis of cancer disease in Asian countries and then relate how such studies are aiding respective countries in their cancer control and prevention programs. The review provides a historical analysis of peer reviewed literature in this field, exploring the methodological attempts, diverse applications and challenges in cancer based clinico-epidemiological studies. Finally, recommendations and challenges are discussed so that developing countries can also achieve what the USA has done in this field.

**Keywords:** Cancer, GIS, SDG 3.4, geospatial analysis