

SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FAR FUTURE (D4)  
Contribution of Space Activities to Solving Global Societal Challenges (4)

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EMPLOYING THE USE OF GIS AND EMERGENT TECHNOLOGIES TO AID IN THE HEALTH  
CARE IN DEVELOPING COUNTRIES

**Abstract**

Geographic information systems rely on using variables in specific environments to predict dissemination through spatio-temporal analysis. The combination of data analysis, geospatial mapping, and disease outcomes allow more accurate models of predictive analysis for the spread of diseases. This analysis shows that there are significant economic and health benefits of applying such software in the field of health and to an environment that lacks an organized public health system. In fact, GIS software is so useful in the prediction of epidemics and the creation of spread models that it has been shown to significantly decrease deaths in disease outbreak. Further, the ability to predict the likely path of disease spread allows developing countries to place interventions and treatments in place to treat the maximum number of cases.

The challenge has been to look at the ability of developing nations to capture, manage, and respond to GIS data. With the advent of an increasingly large release of open data from space organizations and governments around the world, and the use of social media across nations, this is now becoming possible. This paper will look at the integration of existing and emergent data sources, the use of those, and how it is impacting health care across the globe.