

## The Potential Effect of Climate Changes on Food and Water Associated Infections

**Authors :** Mohammed A. Alhoot, Rathika A/P Nagarajan

**Abstract :** Climate change and variability are affecting human health and diseases direct or indirectly through many mechanisms. Change in rain pattern, an increase of temperature and humidity are showing an increased trend in Malaysia. This will affect the biological, physical and chemical component of water through different pathways and will enhance the risk of waterborne diseases. Besides, the warm temperature and humid climate provide very suitable conditions for the growth of pathogenic bacteria. This study is intended to highlight the relationship between the climate changes and the incidence food and water associated infections. Incidences of food and water associated infection and climate data were collected from Malaysian Ministry of health and Malaysian Metrological Department respectively. Maximum and minimum temperature showed high correlation with incidence of typhoid, hepatitis A, dysentery, food poisoning (P value  $<0.05$  significant with 2 tailed /  $0.5 < [r]$ ). Heavy rainfall does not associated with any outbreaks. Climate change brings out new challenges in controlling food and water associated infections. Adaptation strategies should involve all key stakeholders with a strong regional cooperation to prevent and deal with cross-boundary health crises. Moreover, the role of health care personnel at local, state and national levels is important to ensure the success of these programmes. As has been shown herein, climate variability is an important element influencing the food and water associated epidemiology in Malaysia. The results of this study are crucial to implementing climate changes as a factor to reduce any future outbreaks.

**Keywords :** climate change, typhoid, hepatitis A, dysentery, food poisoning

**Conference Title :** ICECCHH 2016 : International Conference on Environment, Climate Change and Human Health

**Conference Location :** Amsterdam, Netherlands

**Conference Dates :** May 12-13, 2016