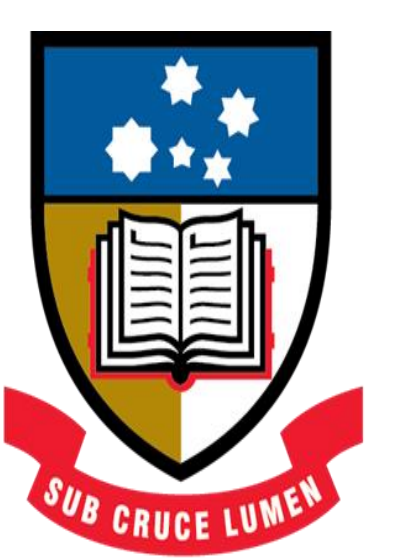


# Modeling the effects of climate variability on childhood diarrhea in Kathmandu, Nepal



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of ADELAIDE

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**Conclusion: We observed an increased risk of childhood diarrhoea with an increase in maximum temperature and precipitation for Kathmandu Nepal.**

## Background

Evidence suggests that onset and transmission of diarrheal diseases can be influenced by many factors including climatic parameters like precipitation and temperature (1-2).

## Methods

- A time series study (2003-2013), was conducted using a quasi Poisson generalised linear model.
- Damage function approach was used to project future burden of diarrhea under climate change scenarios (3).

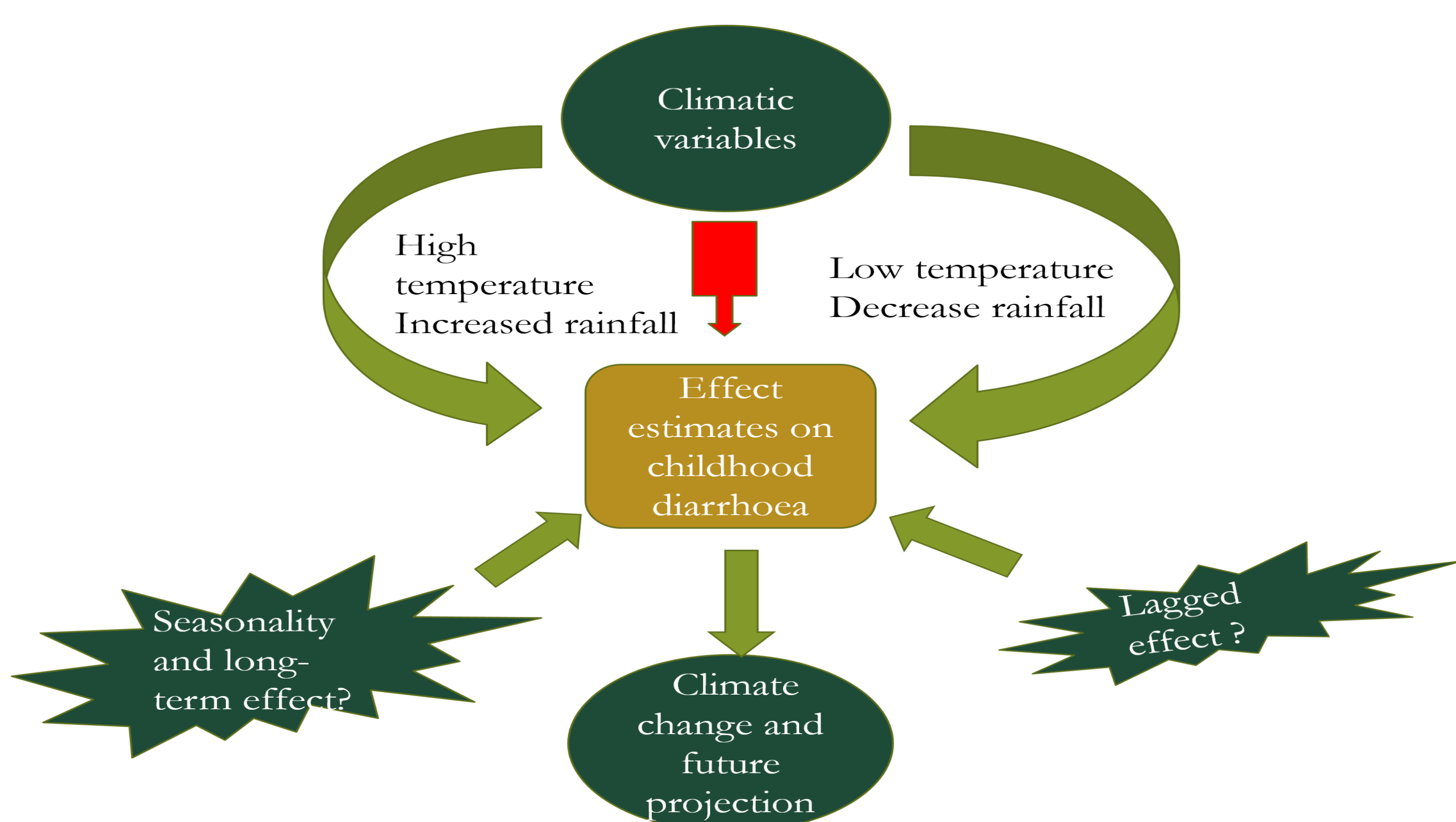


Figure 1. Methodological framework

## Discussion

Plausible explanations of the observed results in Kathmandu could be:

- Increased survival rate of pathogens during hotter weather and, compromised hygiene practices among care givers during dry months.
- Contamination of water sources due to overflowing or leakage of sewage during heavy rainfall events.

## Acknowledgements

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## Results

We estimated,

- 8.1% (RR:1.081; 95% CI: 1.02-1.14) increase in risk of diarrhea per every 1°C increase in maximum temperature above its monthly average and,
- 0.9% (RR:1.009; 95% CI: 1.004-1.015) increase in risk of diarrhea per every 10 mm increase in total monthly precipitation above its monthly average, (Figure 2).

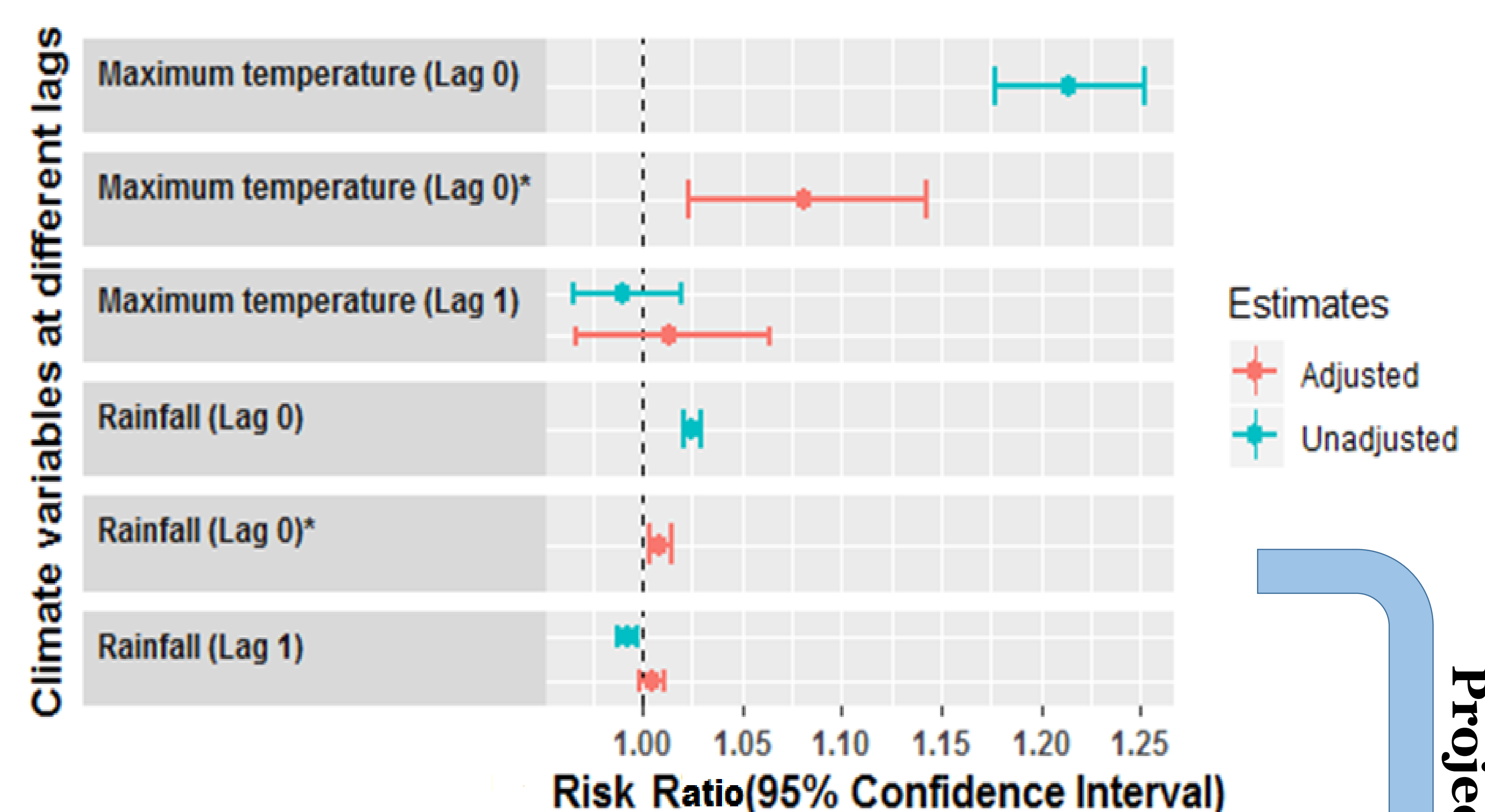


Figure 2. Effect estimates of maximum temperature and rainfall on monthly diarrhea cases at different lag periods.

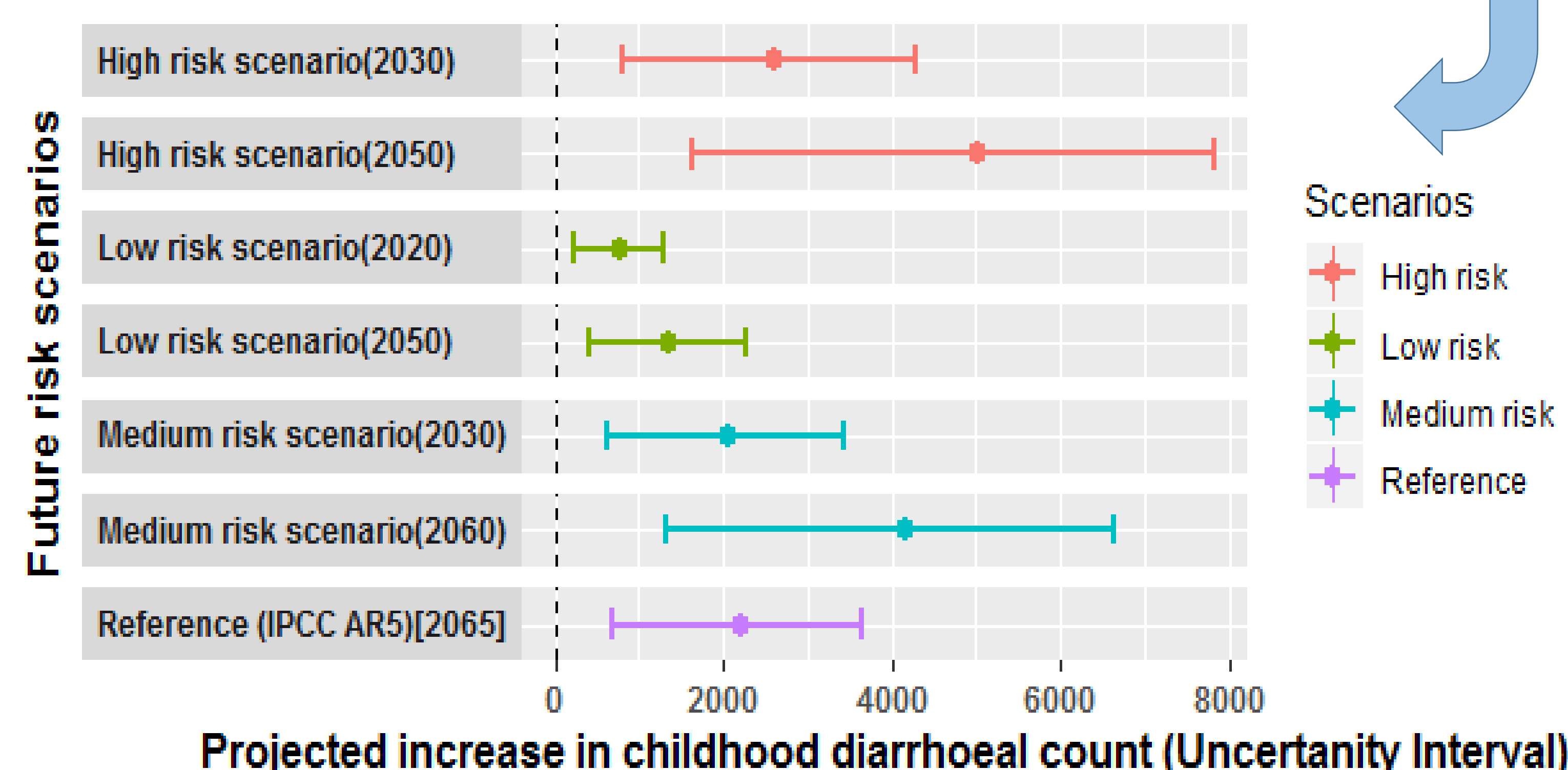


Figure 3. Projected increase in diarrheal count attributable to climate change, among children under 5 years of age living in Kathmandu,

## References:

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