

# Evaluating Climate Change Adaptation through Evacuation Decisions: A Case Study of Cyclone Management in India

Saudamini Das

## **Abstract**

Adaptations to extreme climatic events like tropical storms are being built into disaster management by empowering vulnerable communities through activities like disaster awareness, trainings on rescue measures, provisions of better infrastructure, and strengthening of societal institutions under the Disaster Risk Reduction and Disaster Risk Management programs. With increasing threats from climate change, it is essential that the effectiveness of such measures is evaluated and limitations are addressed. The State of Odisha in Eastern India had witnessed nearly 10 years of such capacity building for cyclone management when it was hit by the severe cyclone “Phailin” in 2013. The public response to the evacuation order was overwhelming. In some areas, as many as 95% of the residents evacuated, and they were aware of the precautions to be taken before a storm strikes whereas some other areas showed as low as 33% evacuation and least interest in training and capacity building programs and maintenance of critical infrastructure like cyclone shelters. Analyzing evacuation responses with logistic regression, social economic issues like unemployment, prevalence of theft, and no provision for the evacuation of livestock to safety explained the evacuation failure significantly. In the future, such extreme events are predicted to hit coastal areas with more intensity due to climate change, and this necessitates that governments address such socio-economic problems along with cyclone adaptation programs to make disaster management more effective.