

New phone alerts for extreme weather may prevent casualties in India

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When Cyclone Phailin hit India in late 2013 it became the largest storm to batter the subcontinent in over a decade. The storm, officially classified as a Category 5 tropical cyclone, affected more than 12 million people in India and neighboring countries, and required mass evacuations.

These evacuations revealed an urgent need for an effective alert system which could forewarn the majority of the population. A new paper published in *Atmospheric Science Letters* details how computer science undergraduates have created image based mobile phone alerts, connected to the Weather Research and Forecasting system.

India has a [mobile phone](#) subscriber base exceeding 929 million people and this is expected to touch 1.15 billion by the end of 2014. An alert system developed for mobiles could reach an estimated 97% of the population..

The paper details how during the 2013 storm the computer scientists were able to track its genesis, progression and landfall. By converting this information into images suitable for phones, they created a forecasting and warning system accessible to ordinary citizens.

"Cyclone alerts can save lives and property, but must be easily accessible," said Dr. Sat Ghosh. "The global perception of India's emerging IT prowess is lopsided. It is thought of as merely a manufacturing hub; however, our article puts the country's numerical

literacy to practical use. The easy-to-use Weather Research and Forecasting model remains confined to an elite group of users, such as atmospheric scientists and weather forecasters. Our research explores how the WRF forecast can be interfaced with mobile telephony which has a deep penetration even in rural pockets of India."

More information: S. Ghosh, Vivek Vidyasagar, Subramanian Sandeep, Smart cyclone alerts over the Indian subcontinent, *Atmospheric Science Letters*, [DOI: 10.1002/asl2.486](https://doi.org/10.1002/asl2.486)

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