

People's movement perturbed during, but similar after Hurricane Sandy

November 19 2014



Credit: NASA's Earth Observatory/LANCE MODIS Rapid Response Team

New York City residents' movement around the city was perturbed, but resumed less than 24-hours after Hurricane Sandy, according to a study published November 19, 2014 in the open-access journal *PLOS ONE* by Qi Wang and John Taylor from Virginia Tech.

Tropical cyclones, including hurricanes and typhoons, are severe natural disasters that can cause tremendous loss of human life and suffering. Our knowledge of peoples' movements during [natural disasters](#) is so far limited due to a lack of data. The authors of this article studied human mobility using movement data from individuals active on Twitter in New York City for 12 days during and after Hurricane Sandy in 2012. They analyzed location data attached to over 700,000 tweets from over 53,000 people and mapped each location during 24-hour periods over the 12 days.

The researchers observed that peoples' locations covered nearly the entire mapped area and showed similar geographical and statistical distributions to 24-hour periods soon after the hurricane, including areas subject to mandatory evacuation. These results may indicate that New Yorkers were relatively resilient in terms of human mobility during Hurricane Sandy. While resilience could be vital for the city's post-disaster response and recovery, it may also be dangerous if people are moving through mandated evacuation areas during or immediately following [extreme weather events](#) like a hurricane. U

nderstanding nuances of [human mobility](#) under the influence of such disasters will enable more effective evacuation, emergency response planning, and development of strategies and policies to minimize human fatality, injury, and economic loss.

More information: Wang Q, Taylor JE (2014) Quantifying Human Mobility Perturbation and Resilience in Hurricane Sandy. *PLoS ONE* 9(11): e112608. [DOI: 10.1371/journal.pone.0112608](https://doi.org/10.1371/journal.pone.0112608)

Provided by Public Library of Science

Citation: People's movement perturbed during, but similar after Hurricane Sandy (2014, November 19) retrieved 24 April 2024 from <https://phys.org/news/2014-11-people-movement-perturbed-similar-hurricane.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.