National Science Foundation awards over $5 million in grants to study hurricanes
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The 2017 hurricane season is on track to be one of the most damaging and costly on record. Although the costs for Hurricanes Harvey, Irma, and Maria are still being assessed, the lowest current estimates of damage from Harvey alone fall in the $40 to $50 billion range, making it one of the most expensive hurricanes in American history.

In late August, Hurricane Harvey dropped more than 50 inches of rain on parts of Texas. Two weeks later, Hurricane Irma struck Florida as a Category 4 storm with maximum sustained winds of 130 mph, marking the first time in recorded history that the continental United States suffered two landfalls of such intensity within a single hurricane season. Hurricane Maria devastated the islands of Dominica and Puerto Rico as a Category 5 storm shortly thereafter, and caused catastrophic damage and numerous fatalities across the northeastern Caribbean.

In the wake of this year's disastrous hurricane season, the National Science Foundation (NSF) has awarded 59 grants totaling $5.3 million for projects that aim to that study how hurricanes form and intensify, and how we can best respond to the devastating effects of such disasters. While these financial awards mainly support projects related to Hurricanes Harvey and Irma, NSF also expects to fund other studies related to Hurricane Maria.

According to NSF Director France Córdova, scientists funded by the agency have a long history of advancing our understanding of large-scale disasters and their aftermath. Previous NSF funding has led to the creation and deployment of underwater rescue robots to safeguard rescue workers, increased ability to predict the paths of tropical cyclones, real-time models of flood potential, and specifications for building hazard-resistant structures. In addition, researchers supported by NSF have made important discoveries regarding long-term psychological and emotional effects of disasters.

As part of the new hurricane-related grants, scientists will delve into the response and recovery of aquatic ecosystems such as lakes and rivers, the mobilization of chemical and microbial contaminants after extreme flooding, and the public health implications of post-flood disease spread. Other research will focus on how people affected by the hurricanes use social resources and how new resources can be created to assist in disaster recovery.

Sources: CNN, National Science Foundation, NOAA National Centers for Environmental Information, The Weather Channel