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Donna

Property damage in the continental United States: $1 billion; lives lost: 17. Such is the estimate of the damage wrought by Donna, last month's major hurricane. What is most remarkable is that a storm so destructive of property claimed so few lives even though it hit heavily populated regions. Diane, in 1955, did half the damage and killed ten times as many people.

The difference is no chance variation. It is rather the pay-off on cooperative scientific and community efforts in the intervening years. Late in 1955 the National Hurricane Research Project was organized in the U.S. Weather Bureau. This project has had the close cooperation of all government agencies concerned and of several universities and other institutions working under contract with the bureau. In addition, the United States operates eight upper air stations cooperatively with other nations in the Caribbean Sea.

When Donna was first spotted on 2 September 1200 miles ESE of San Juan, Puerto Rico, an extensive network of weather stations, many equipped with special radars of 200-mile range, was ready to go into action. Navy, Air Force, and Weather Bureau planes were dispatched to fly into the hurricane. The data provided enabled forecasters both to make continuous predictions of Donna's course as she moved slowly westward across the Lesser Antilles and to correct these predictions as minor deviations occurred. The accurate prediction in Donna's course was a major factor in reducing the loss of life: precise warnings were given hours before she struck Miami on 10 September. But other factors played a part. The Weather Bureau, thanks to research about the way people react to emergencies by the Disaster Study Committee of the National Academy of Sciences–National Research Council, has developed more effective reports for the public. A person in the pathway is not so much interested in the exact position of the eye of the hurricane as in whether his house is likely to be wrecked, whether he is likely to be cut off or drowned by floods, and what steps he can take to protect himself. This kind of information was provided, but to do so it was necessary to predict which roads would be flooded by swollen streams or high tides. Studies of previous hurricanes in cooperation with the Coast and Geodetic Survey and the Army Corps of Engineers made it possible to predict high water with more precision than in the past.

So much for the scientific effort, which provided accurate information. Public cooperation also played an important role in saving lives. Broadcasts of information were effective, and the Red Cross and Civil Defense organizations as well as state and local governments worked together to evacuate people from hazardous places.

The whole episode is a gratifying example of cooperation—scientific, international, state and municipal, public and private. What of the future? Not much more can be expected from cooperation—it is hard to improve on near-perfection. The answer, if there is one, lies in further research. Why did a subsequent hurricane, Florence, which looked like Donna's twin sister at first, peter out? Will it be possible to predict the time and place of hurricane formation? Perhaps Donna, the most intensively studied hurricane in history, will suggest some answers as the vast mass of data gathered about her is analyzed during the coming months and years.—G.DuS.