Our Ocean Backyard

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Another Climate Disaster

Hurricane Ian has taken a huge toll on Florida and the Carolinas. This was a massive and destructive event by any measure. Hurricanes are classified by their wind speeds, with Category 5 as high as the scale goes, meaning wind speeds of 157 miles/hour or greater. While Ian was classed as Category 4, wind speeds reached 155 mph. Whether 4 and 5, either will result in catastrophic damage and the many photographs of destruction show what catastrophic damage really is.

As Ian came ashore it ripped roofs off and then flattened houses, completely obliterated mobile homes, uprooted trees and threw large boats onto docks and into back yards. Based on damage and fatalities, it will almost certainly be ranked as one of the United States’ most powerful storms. The information collected to date indicates Ian is shaping up to be the deadliest storm to hit Florida since 1935.

Wind damage is one major hazard along with extreme rainfall, but storm surge was the largest threat when Ian made landfall. It’s still not completely clear how high above the predicted tide the waters actually reached, but one account has listed 18 feet! When the hurricane hit Sanibel Island, on the west coast of Florida, water levels pushed inland quickly with the height of the water going from street level to the height of a stop sign in less than 30 minutes. Stop signs are generally higher than people, even tall people. Many people who chose not to evacuate were trapped in their homes. Storm surge was essentially the water from the Gulf of Mexico blown onshore by exceptionally high winds, aided by waves and low atmospheric pressure, allowing the water to rise.

We don’t have anything remotely similar to hurricanes along the central California coast. We do get ocean water elevated by perhaps a foot from large El Nino events, very high (king) tides and wave setup where a sequence of waves will raise water levels along the shoreline; But nothing like 18 feet of storm surge.

As of Thursday October 6, there had already been over 120 fatalities confirmed by the media, most of whom drowned. But there were still many people unaccounted for and more being found as crews went from door to door searching for survivors. Sanibel Island, with a year-round population of 7,500, was completely cut off from the mainland when the causeway to the island was destroyed. The town of Fort Meyers was nearly completely demolished as homes and businesses were decimated.

There are some important lessons from Hurricane Ian that we need to think seriously about before we start into yet another cycle of federal aid and rebuilding in the same areas again. Hurricanes are getting more powerful as the oceans continue to warm. It is the evaporation from the warmer ocean waters and the subsequent atmospheric circulation and winds that produce these hurricanes with their associated heavy rainfall and storm surges. They aren’t going away and if anything, all indications are that they will become even more powerful.

We have different climate change problems here in California as we are entering the 4th year of a prolonged drought, with the last three years being the driest in the state in the last 125 years, as far back as reliable rainfall records extend. We are all beginning to witness the impacts of a prolonged drought. Higher temperatures and water shortages and what these means for the state’s agricultural industry that provides the great majority of the nation’s fruits, vegetables and nuts.

But back to Florida and what typically follows each hurricane. The federal government and states have repeatedly provided incentives to build back in the same places rather than relocate. The homeowners understandably want to reclaim their land and rebuild their homes. But is this the smartest thing to do and would this continue without federal subsidies and encouragement?

Southwest Florida, where Ian made a direct hit, was smacked in nearly the same location by Hurricane Charley in 2004, also a Category 4 event causing major damage. The federal government historically has spent billions of dollars assisting with the building of new infrastructure (roads, bridges, water and sewer lines, for example), in repeatedly damaged areas. Fortunately the national flood insurance program as well as private insurers are finally realizing that these are not cost-effective programs in these locations. Rates are going up and some private insurance companies are closing up shop, as these are losing propositions.

It's been said that there are two kinds of people, those that make mistakes and those that make the same mistakes twice. We must learn from these disasters and tragedies and not rebuild again in the same hazardous areas that will only increase future risks on a planet that continues to get warmer. While sad, we need to face a changing reality.