NEWS

MINISTERS: from front

Hour Leader, Worship Leader, and Praise Team member. Frank is a second-generation member and is married to La'Nita Landers Jones.

Minister John Perry has served as a Worship Leader, Sunday School Teacher, Praise Team member, and member of Family Ministry 1. John is a native of Louisiana and is married to Tuesday White Perry.

Lee Stewart is former Chairman of the Churchwide Security Patrol, having recommended several initiatives to secure the facility and its members based on his experience in law enforcement. Lee has served as a Deacon, Sunday School Teacher and Worship Leader and is married to Irma Price Stewart.

Second Baptist is blessed with a broad background of experience and dedication to service that these newly ordained reverends bring.

Serving on the Ordination Council for Second Baptist Church during the recent ordaining of ministers are the following ordained pastors, from left: Pastor Gary Hathaway - Greater Tucker Missionary Baptist Church; Pastor Brandon Malone - Greater Faith Temple Baptist Church; Pastor Wayne Johnson - New Hope Missionary Baptist Church; Dr. Ernest L. Reid, Jr. – SMBC, Host Pastor; Dr. William Terry Ladd, III – Pastor of First Baptist Church E. 8th Street, Council Catechizer; Pastor Edward Ellis - Mount Peria Missionary Baptist Church, Rev. Alfred Johnson – Pastor Emeritus of Shiloh Baptist Church (Cleveland, TN); and Dr. R. Gregory Odom - New Monumental Missionary Baptist Church.

Hurricane Ian capped 2 weeks of extreme storms around the globe: Here's what's known about how climate change fuels tropical cyclones

The day after Hurricane Ian made landfall, homes were surrounded by water in Fort Myers, Fla. AP Photo/ Marta Lavandier

Mathew Barlow
Professor of Climate Science,
UMass Lowell
Suzana J. Camargo
Lamont Research Professor of Ocean and Climate Physics, Columbia University

When Hurricane Ian hit Florida, it was one of the United States' most powerful hurricanes on record, and it followed a two-week string of massive, devastating storms around the world.

A few days earlier in the Philippines, Typhoon Noru gave new meaning to rapid intensification when it blew up from a tropical storm with 50 mph winds to a Category 5 monster with 155 mph winds the next day. Hurricane Fiona flooded Puerto Rico, then became Canada's most intense storm on record. Typhoon Merbok gained strength over a warm Pacific Ocean and tore up over 1,000 miles of the Alaska coast.

Major storms hit from the Philippines in the western Pacific to the Canary Islands in the eastern Atlantic, to Japan and Florida in the middle latitudes and western Alaska and the Canadian Maritimes in the high latitudes.

A lot of people are asking about the role rising global temperatures play in storms like these. It's not always a simple answer.

It is clear that climate change increases the upper limit on hurricane strength and rain rate and that it also raises the average sea level and therefore storm surge. The influence on the total number of hurricanes is currently uncertain, as are other aspects. But, as hurricanes occur, we expect more of them to be major storms. Hurricane Ian and other recent storms, including the 2020 Atlantic season, provide a picture of what that can look like.

Our research has focused on hurricanes, climate change and the water cycle for years. Here's what scientists know so far.

Rainfall: Temperature has a clear influence

The temperature of both the ocean and atmosphere are critical to hurricane development.

Hurricanes are powered by the release of heat when water that evaporates from the ocean's surface condenses into the storm's rain.

A warmer ocean produces more evaporation, which means more water is available to the atmosphere. A warmer atmosphere can hold more water, which allows more rain. More rain means more heat is released, and more heat released means stronger winds.

These are basic physical properties of the climate system, and this simplicity lends a great deal of confidence to scientists' expectations for storm conditions as the planet warms. The potential for greater evaporation and higher rain rates is true in general for all types of storms, on land or sea.

That basic physical understanding, confirmed in computer simulations of these storms in current and future climates, as well as recent events, leads to high confidence that rainfall rates in hurricanes increase by at least 7% per degree of warming.

Storm strength and rapid intensification

Scientists also have high confidence that wind speeds will increase in a warming climate and that the proportion of storms that intensify into powerful Category 4 or 5 storms will increase. Similar to rainfall rates, increases in intensity are based on the physics of extreme rainfall events.

Damage is exponentially related to wind speed, so more intense storms can have a bigger impact on lives and economies. The damage potential from a Category 4 storm with 150 mph winds, like Ian at landfall, is roughly 256 times that of a category 1 storm with 75 mph winds.

Whether warming causes storms to intensify more rapidly is an active area of research, with some models offering evidence that this will probably happen. One of the challenges is that the world has limited reliable historical data for detecting long-term trends. Atlantic hurricane observations go back to the 1800s, but they're only considered reliable globally since the 1980s, with satellite coverage.

That said, there is already some evidence that an increase in rapid intensification is distinguishable in the Atlantic.

Within the last two weeks of September 2022, both Noru and Ian exhibited rapid intensification. In the case of Ian, successful forecasts of rapid intensification were issued several days in advance, when the storm was still a tropical depression. They exemplify the significant prog