



Currently: 68° F
 Partly Cloudy
 Humidity: 88%

Chance of precip: 14%

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NEWS

The storms are coming

WILL THIS YEAR'S HURRICANE SEASON HOLD ANOTHER ISABEL?

BY KIMBERLY LENZ

April 23, 2004

This is not the weather prediction that locals still patching houses want to hear: It'll be another busy hurricane season, probably equal to last year's seven named storms.

So how about another forecast of, say, five storms?

Both are real forecasts, generated by different scientists using similar data.

This month, William Gray, a Colorado State University professor who has predicted hurricane activity for 21 years, said he believes the 2004 season's total will be seven, a higher than usual number.

But James Elsner, a Florida State University professor who started forecasting hurricanes because a student wanted to "beat" Gray, predicted five.

Yet another forecast is expected May 17, when the National Oceanic and Atmospheric Administration's 2004 hurricane season "outlook" kicks off the federal agency's National Hurricane Preparedness Week. Hurricane season runs from May 1 through November 30, with the bulk of activity toward late summer and early fall.

Gray will update his 2004 Atlantic Basin hurricane predictions May 28, Aug. 6, Sept. 3 and Oct. 1. Elsner's annual forecast, a six-year look, came out Jan. 1.

Who's right?


Seven hurricanes formed in 2003. Elsner predicted seven, and last year's NOAA forecast was a range of between six and nine. Since beginning the forecast, the NOAA is five for five. Elsner has a similar record using range. Gray, on the other hand, hasn't been perfect since 1994, when all six predicted hurricanes materialized.

But most meteorologists say it doesn't really matter who's the most accurate.





"Any publicity is good because it gets people's attention," said Frank Lepore, a spokesman for the National Hurricane Center. "But it's only useful to the extent that it is understood and implemented."

The Colorado, Florida and federal predictions are the result of a statistical soup created from more than 50 years of data about sea-surface temperatures, sea-level air pressure, east-west wind speeds, and rainfall in Africa.

It's a collection that Gray started assembling more than 20 years ago, based on the

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Science Under the Big Top


model an Australian scientist used to forecast tropical storm activity.

Since then, Elsner, NOAA and others have refined Gray's model.

A more sophisticated statistical analysis gives Elsner's forecasts the ability to include a range of hurricane chance, not just for the season ahead but the next six.

Lepore said it makes sense for scientists to offer a range.

"You want to convey a degree of uncertainty," he said, "because really there's enough chaos in the science that probably it's best for the public to be unsure."

That chaos lay mostly in the upper hand that other weather systems have in all of this. Before a cold front, for example, has the opportunity to rip apart a hurricane, consider what a hurricane has to go through to have a chance of making landfall:

Giant thunderstorm complexes provide the seeds for hurricanes that form in the Atlantic Ocean. Sixty to 70 of these gales form over Africa every year, then slide over the Atlantic Ocean. If the water temperature is warm enough, the thunderstorm picks up fuel. That weather commotion then turns into a wave, which then depends on the right sort of wind with just-so pressure and temperature to invigorate the system and whip it into a storm that can become a hurricane.

A half-century of obscure weather data has made it possible for people like Gray and Elsner to take hurricane prediction that far, with increasing accuracy.

There's one big question that no data, no matter how lovingly crunched, can answer: Where will a hurricane hit?

"The last thing any community would need is a one-two punch," said Poquoson City Manager Charles Burgess, whose city was among the hardest hit last year by Isabel. "That a hurricane is coming isn't anything we'd want to hear."

Absent landfall precision, the best a forecast can accomplish for residents, Burgess said, is to make them more aware of the potential for danger and to get them prepared.

But preparedness, he said, is something that can be measured only after the fact.

With the number of residents who stayed put instead of seeking higher ground, Burgess said one of the lessons Isabel taught was that the city needed to do a better job of public education.

Hurricane forecasting is mostly about knowing how to set up, then execute sublime mathematical equations that take into account factors most of us never consider.

Sometimes it's about something a little more somber, like African rainfall. That indicator hasn't been terribly reliable since about 1995, said Philip Klotzbach, a Colorado State University researcher who works with Gray.

"There's a lot of chaos" in Africa's political scene Klotzbach said, and that non-meteorological factor has made it more difficult for locals to read rain gauges regularly.

Sometimes forecasting is about something hilarious, like the apparent extreme drought at one station in China.

Klotzbach said a miscommunication during installation of a rain gauge there caused Chinese locals to do all they could to prevent the gauge from getting wet.

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