



Another Active Atlantic Hurricane Season Foreseen for 2002 by TSR Consortium

London, 3rd December 2001

The USA and Caribbean will have to brace themselves for another active Atlantic hurricane season next year, leading weather experts say.

Three days after the end of the active 2001 Atlantic hurricane season, the Tropical Storm Risk (TSR) consortium today issued projections for yet another above average Atlantic hurricane season in 2002. The Atlantic hurricane season lasts from 1st June to 30th November.

TSR anticipates four tropical storm strikes on the USA in 2002 of which two will be hurricanes. Two tropical storm hits, including one hurricane, are foreseen for the Caribbean Lesser Antilles. For the Atlantic basin as a whole, TSR expects thirteen tropical storms, with eight of these being hurricanes and three intense hurricanes. Such activity would be 10% above the average level for the past ten years and 30-40% above the prior 30-year average.

TSR's lead scientists, Dr Mark Saunders and Dr Paul Rockett of the Benfield Greig Hazard Research Centre at University College London (UCL) - in collaboration with the Met Office and the insurance and risk management industries - have developed innovative long-range forecasts for tropical cyclone activity around the world. By increasing the lead time on weather pattern forecasts, TSR helps governments, administrators and businesses plan further ahead, thus reducing the risk and uncertainty inherent in varying active and inactive storm seasons.

"Our projections for the Atlantic in 2002 sustain the recent cycle of high hurricane activity, with 1995-2002 set to become the most active eight-year period for Atlantic hurricanes on record," said Saunders. The total of 65 hurricanes from 1995-2002 would exceed by four the previous highest eight-year total set in 1948-1955. "There can be little doubt the Atlantic is in a more active hurricane phase," Saunders added.

The two main climate factors influencing the TSR seasonal Atlantic hurricane forecast for 2002 are: the expected August and September 2002 values for (a) the speed of the trade winds which blow westward across the tropical Atlantic and Caribbean Sea and (b) the temperature of the sea waters between west Africa and the Caribbean. TSR anticipates warmer than normal waters and weaker than normal trades in 2002; conditions both favouring an active hurricane season.

Hurricanes rank above earthquakes and floods as the USA's costliest natural disaster. The average damage bill per year from hurricane strikes on the continental US 1926-2000 is estimated to be US \$ 5.1 billion (2000 \$).

TSR forecasts cover three regions of tropical cyclone activity – the Atlantic, Australia and NW Pacific. The TSR team correctly predicted the above average 2001 Atlantic hurricane season and accurately forecast the numbers of Australian-region tropical storms, severe tropical cyclones and Queensland-striking tropical storms during the 2000/2001 season. The team also exactly predicted the numbers of NW Pacific tropical storms (25), typhoons (14), intense typhoons (7) and Japan-striking typhoons (2) occurring in 2000.

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Notes to Editors:

TropicalStormRisk.com (TSR)

TSR is a venture which has developed from the UK government-supported TSUNAMI initiative project on seasonal tropical cyclone prediction. The TSR consortium comprises UK insurance industry experts and leading scientists on seasonal forecasting. The TSR industry expertise is drawn from the *Benfield Group*, the leading independent reinsurance intermediary, *Royal & SunAlliance*, the global insurance group, and from *Crawford & Company*, a global provider of risk management services. The TSR scientific grouping brings together climate physicists, meteorologists and statisticians at UCL (University College London) and the *Met Office*.

Atlantic Total Numbers in 2002

| | | Intense <u>Hurricanes</u> | <u>Hurricanes</u> | Tropical <u>Storms</u> |
|--------------------------|-----------|------------------------------|-------------------|---------------------------|
| TSR Forecast (\pm SD) | 2002 | 3.0(\pm 1.6) | 7.5 (\pm 2.5) | 13.0(\pm 3.6) |
| Average (\pm SD) | 1992-2001 | 2.9(\pm 1.7) | 6.8 (\pm 2.5) | 11.4 (\pm 3.5) |
| Average (\pm SD) | 1972-2001 | 2.1(\pm 1.8) | 5.7 (\pm 2.7) | 9.5 (\pm 3.6) |

Key: Intense Hurricane = 1 Minute Sustained Wind > 95Kts = Hurricane Category 3 to 5
Hurricane = 1 Minute Sustained Wind > 63Kts = Hurricane Category 1 to 5
Tropical Storm = 1 Minute Sustained Wind > 33Kts
SD = Standard Deviation
Forecast Error = Standard Deviation of Independent Hindcast Errors for 1987-2001

USA Landfalling Numbers in 2002

| | | <u>Hurricanes</u> | Tropical <u>Storms</u> |
|--------------------------|-----------|-------------------|---------------------------|
| TSR Forecast (\pm SD) | 2002 | 1.8 (\pm 1.1) | 3.7 (\pm 1.3) |
| Average (\pm SD) | 1992-2001 | 1.2 (\pm 1.2) | 3.3 (\pm 1.8) |
| Average (\pm SD) | 1972-2001 | 1.2 (\pm 1.1) | 2.6 (\pm 1.8) |

Key: Landfall Strike Category = Maximum 1 Minute Sustained Wind of Storm Coming Within 30km of Land
USA Mainland = Brownsville (Texas) to Maine

Caribbean Lesser Antilles Landfalling Numbers in 2002

| | | <u>Intense Hurricanes</u> | <u>Hurricanes</u> | <u>Tropical Storms</u> |
|--------------------------|-----------|-------------------------------|-------------------|----------------------------|
| TSR Forecast (\pm SD) | 2002 | 0.4(\pm 0.4) | 0.8 (\pm 0.7) | 1.9(\pm 1.0) |
| Average (\pm SD) | 1992-2001 | 0.3 (\pm 0.4) | 0.7 (\pm 0.7) | 1.5 (\pm 1.0) |
| Average (\pm SD) | 1972-2001 | 0.2 (\pm 0.5) | 0.4 (\pm 0.7) | 1.1 (\pm 1.0) |

Key: Landfall Strike Category = Maximum 1 Minute Sustained Wind of Storm Coming Within 30km of Land
 Lesser Antilles = Island Arc from Anguilla to Trinidad Inclusive

The full forecast may be viewed as a PDF download at the TSR web site <http://tropicalstormrisk.com>.