



Active Atlantic Hurricane Season Now Foreseen by TSR Consortium

London, 10th July 2001

The Tropical Storm Risk (TSR) consortium today revised upwards its predictions for the 2001 Atlantic hurricane season. The number of hurricanes striking US and Caribbean Lesser Antilles shores are expected to be 20-30% above average in 2001. Atlantic basin hurricane activity is expected to reach levels comparable to the active 2000 season.

TSR's lead scientists Dr Mark Saunders and Dr Paul Rockett of the Benfield Group Hazard Research Centre at University College London (UCL) have developed - in collaboration with the Met Office - innovative long-range forecasts for tropical cyclone activity around the world.

In May 2000, the TSR team exactly predicted the numbers of NW Pacific tropical storms (25), typhoons (14), intense typhoons (7) and Japan-striking typhoons (2) occurring in 2000. In December 2000, the team accurately forecast the numbers of Australian-region tropical storms, severe tropical cyclones, and Queensland-striking tropical storms during the 2000/2001 season.

The TSR pre-season forecast for the 2001 Atlantic hurricane season - which runs from 1st June to 30th November - called for near-average activity levels. This updated forecast anticipates increased storminess due to improved projections for the two main climate factors affecting hurricane activity during the season peak in August and September. In particular, TSR anticipates that the waters between west Africa and the Caribbean will be warmer than normal, and the trade winds plying the tropical north Atlantic and Caribbean Sea will be weaker than normal. Both these conditions favour an active hurricane season. The inclusion of June climate data raises the August-September forecast skill of both these climate indicators by 20%. Thus hurricane projections made in early July have higher skill than those issued in early June.

TSR anticipates four tropical storm strikes on the USA in 2001 of which two will be hurricanes. Two tropical storm hits on the Caribbean Lesser Antilles are foreseen of which one will be a hurricane. For the Atlantic basin as a whole, TSR expects thirteen tropical storms, with eight of these being hurricanes and three intense hurricanes. These projections point to activity 20-30% above the 1991-2000 average.

Hurricanes rank above earthquakes and floods as the United States' costliest natural disaster. The annual damage bill in the continental US from hurricane landfalls 1926-1999 is estimated to be US \$ 5.2 billion (2000 \$). Substantial interannual variability exists in these losses - witness 1999 and 1997 with bills of US \$ 8.0 billion and just US \$ 0.15 billion respectively. Skilful long-range forecasts of seasonal hurricane strikes will benefit society, business and government by reducing - through the available lead-time - the risk and uncertainty inherent to varying active and inactive storm seasons.

TSR's next forecast for Atlantic, USA and Caribbean Landfalling Hurricanes in 2001 will be released in early August.

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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 leading UK insurance industry experts and scientists at the forefront of seasonal forecasting. The TSR insurance expertise is drawn from *Benfield Group*, a leading independent global reinsurance and risk advisory group, the *Royal and Sun Alliance* insurance company, and from the UK composite and life company *CGNU Group*. The TSR scientific grouping brings together climate physicists, meteorologists and statisticians at *UCL* (University College London) and the *Met. Office*.

Atlantic Total Numbers in 2001

| | | <u>Intense Hurricanes</u> | <u>Hurricanes</u> | <u>Tropical Storms</u> |
|--------------------------|-----------|-------------------------------|-------------------|----------------------------|
| TSR Forecast (\pm SD) | 2001 | 3.2(\pm 1.4) | 7.7 (\pm 1.6) | 12.8 (\pm 2.6) |
| Average (\pm SD) | 1991-2000 | 2.7(\pm 1.8) | 6.4 (\pm 2.6) | 10.8 (\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 1986-2000

USA Landfalling Numbers in 2001

| | | <u>Hurricanes</u> | <u>Tropical Storms</u> |
|--------------------------|-----------|-------------------|----------------------------|
| TSR Forecast (\pm SD) | 2001 | 1.9 (\pm 0.9) | 3.6 (\pm 1.2) |
| Average (\pm SD) | 1991-2000 | 1.3 (\pm 1.2) | 3.1 (\pm 1.8) |

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

Caribbean Lesser Antilles Landfalling Numbers in 2001

| | | <u>Intense Hurricanes</u> | <u>Hurricanes</u> | <u>Tropical Storms</u> |
|--------------------------|-----------|-------------------------------|-------------------|----------------------------|
| TSR Forecast (\pm SD) | 2001 | 0.4(\pm 0.4) | 0.8 (\pm 0.6) | 1.9 (\pm 0.9) |
| Average (\pm SD) | 1991-2000 | 0.3(\pm 0.4) | 0.7 (\pm 0.7) | 1.3 (\pm 1.0) |

Key: Landfall Strike Category = Maximim 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>.