TSR Predicts One of the Most Active Hurricane Seasons on Record

Revised outlook raises Atlantic basin overall activity to record levels; U.S. landfalling activity forecast to be high.

London, 15 August 2005 - Tropical Storm Risk (TSR), the award-winning* consortium of experts on insurance, risk management and seasonal climate forecasting led by UCL's Benfield Hazard Research Centre, today increased its forecast for Atlantic basin hurricane activity in 2005 by a further 30%. The forecast calls for record-breaking activity levels at sea, and for U.S. striking activity to be above-average to high probability though less severe than in 2004.

Based on current and projected climate signals, TSR's updated forecast released today predicts Atlantic basin activity to be record-breaking at 150% above-average and U.S. landfalling tropical cyclone activity to be 90% above-average. The prediction includes:

- A 100% (certain) probability of an above-normal Atlantic hurricane season.
- 22 tropical storms for the Atlantic basin as a whole, with eleven of these being hurricanes and seven intense hurricanes
- An 85% (high) probability of an above-normal U.S. landfalling hurricane activity, a 15% likelihood of a near-normal season and a 0% chance of a below-normal season
- Seven tropical storm strikes on the U.S., of which three will be hurricanes
- Three tropical storm hits, including two hurricanes on the Caribbean Lesser Antilles.

The predicted seasonal totals include the considerable activity which occurred during June and July (seven tropical storms and two intense hurricanes; three U.S. striking tropical storms of which one (Dennis) was a hurricane). If verified, the total of 22 tropical storms would be the highest ever recorded in a North Atlantic season.

TSR's two predictors for hurricane activity at sea are the forecast July-September 2005 trade wind speed over the Caribbean and tropical North Atlantic, and the forecast August-September 2005 sea surface temperature (SST) in the tropical North Atlantic. The former influences cyclonic vorticity (the spinning up of storms) while the latter provides heat and moisture to power incipient storms. TSR anticipates both predictors to have strong enhancing effects on activity in 2005. Only three hurricane seasons since 1950 (1955, 1995, and 1999) have had a trade wind speed higher than that forecast for 2005. The only year with an SST value higher than that foreseen for 2005 is 2004.

TSR's U.S. landfalling forecast is made with their model unveiled in the prestigious scientific journal *Nature* on the 21st April 2005. This model uses anomalies in wind patterns over North America, the east Pacific and North Atlantic during July to predict the wind energy of US striking hurricanes during the main August to October hurricane season. This model correctly anticipated whether U.S. hurricane losses were above-median or below-median in 74% of the years between 1950 and 2003. It also predicted considerably above-average losses for the severe 2004 season.

Professor Mark Saunders, the TSR lead scientist and Head of Seasonal Forecasting and Meteorological Hazards at the Benfield Hazard Research Centre, said "The forecast further confirms that we are witnessing an extremely active period for Atlantic and U.S. landfalling hurricane activity. The years 2003 and 2004 saw the highest two-year total for North Atlantic overall hurricane activity since reliable records began in 1950, and the third highest two-year total number of U.S. hurricane landfalls (7) since 1900. The forecast underlines the need for ongoing vigilance on the part of governments and citizens alike".

Hurricanes rank as the U.S.'s most expensive natural disasters and are responsible for eight of the 10 most costly catastrophes to affect the country. The average annual total and insured losses from hurricane strikes on the continental U.S. 1950-2004 is estimated to be U.S. $5.6 and U.S. $3.0. billion respectively at 2004 prices and exposures.

TSR has an impressive forecasting track record. Recent forecast successes include those for the last three Atlantic hurricane, Northwest Pacific typhoon, and Australian-region tropical cyclone seasons. TSR forecasts may be accessed through the website www.tropicalstormrisk.com.

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Notes to Editors:

About Tropical Storm Risk (TSR):

Founded in 2000, Tropical Storm Risk (TSR) offers a leading resource for forecasting the risk from tropical storms worldwide. The venture provides innovative forecast products to benefit risk awareness and decision making in (re)insurance, other business sectors, government and society. The TSR consortium is co-sponsored by Benfield, the leading independent reinsurance intermediary, Royal & Sun Alliance, the global insurance group, and Crawford & Company, a global claims management solutions company. The TSR scientific grouping brings together climate physicists, meteorologists and statisticians at University College London and the Met Office. www.tropicalstormrisk.com

*Tropical Storm Risk won the prestigious British Insurance Award for London Market Innovation of the Year in 2004. Recent innovations include a breakthrough in the seasonal prediction of hurricane activity reaching the coast of the U.S. and the first demonstration of the business relevance of seasonal U.S. hurricane forecasts. TSR provides tropical storm alert feeds to Reuters AlertNet (www.alertnet.org), the humanitarian news portal, and to the United Nations World Food Programme (http://www.hewsweb.org/)

Nature Paper

Seasonal prediction of hurricane activity reaching the coast of the United States, by Professor Mark A. Saunders and Dr Adam S. Lea, appears in the 21 April, 2005 issue of the journal *Nature*. The paper may be accessed from www.nature.com.

About Benfield Hazard Research Centre:

Benfield Hazard Research Centre is sponsored by Benfield, the leading independent reinsurance and risk intermediary. Benfield's customers include many of the world's major insurance and reinsurance companies as well as Government entities and global corporations. Benfield employs over 1,700 people based in over 30 locations worldwide. www.benfieldgroup.com

With sixty researchers and practitioners, the Benfield Hazard Research Centre is Europe's leading multidisciplinary academic hazard research centre and comprises three groups: Geological Hazards, Meteorological Hazards and Seasonal Forecasting, and Disaster Studies and Management. The Centre is based at University College London, which along with Oxford and Cambridge, is one of the UK's top three multi-faculty teaching and research institutions. www.benfieldhrc.org