



Global risk analysis and preparedness – HSBC's research & experience

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**CLIMATE CHANGE AND FLU
PANDEMIC
CONFRONTING THESE HAZARDS
HEAD ON**

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RISK**

NATURE OF THESE RISKS

- There is potential for a countrywide impact.
- A high degree of pre-planning is necessary to be successful in mitigating the impact.
- There is a certainty of the event but not as to time.
- Risks are multiple with major disruption to supply chains.

PANDEMIC FLU

- Risk remains as strong as ever and arguably more overdue.
- Longer it takes the anticipated virus H5N1 may change rendering medical planning less effective.
- Indonesia remains the battleground but no guarantee.
- Threat planning sees escalating WHO levels with time lag for UK, but!!!
- The clock is ticking just not sure of the time.

KEY PLANNING AREAS

- The loss of up to 50% absenteeism at peak. Key individuals and succession planning.
- Ability to work from home, reliance on internet, prioritisation of users.
- Enhanced cleaning and hygiene regimes, stocking of cleaning products and anti-virals.
- Human Resources policies on vacation, flexible working, activity related salaries and traumatised staff.
- Key suppliers planning.
- Industry wide responsibilities – working together.

RISK IMPACT ON HSBC

- Loss of Business opportunity – profits.
- Business failures and/or increased debt.
- Internal controls less effective.
- Fraud opportunities exploited.
- Regulations cannot be met.
- Staff deaths impacting skill levels and succession planning.
- Affect of Life Assurance claims.

CLIMATE CHANGE

- The acceptance is growing, concern increasing. However time to act is growing shorter.
- Globally and in UK we are already seeing extremes of climatic events.
- Our planning needs to adapt beyond short term problem.
- HSBC are already taking steps now, planning for next 25/50 years on current thinking and considering where our operations may be impacted.

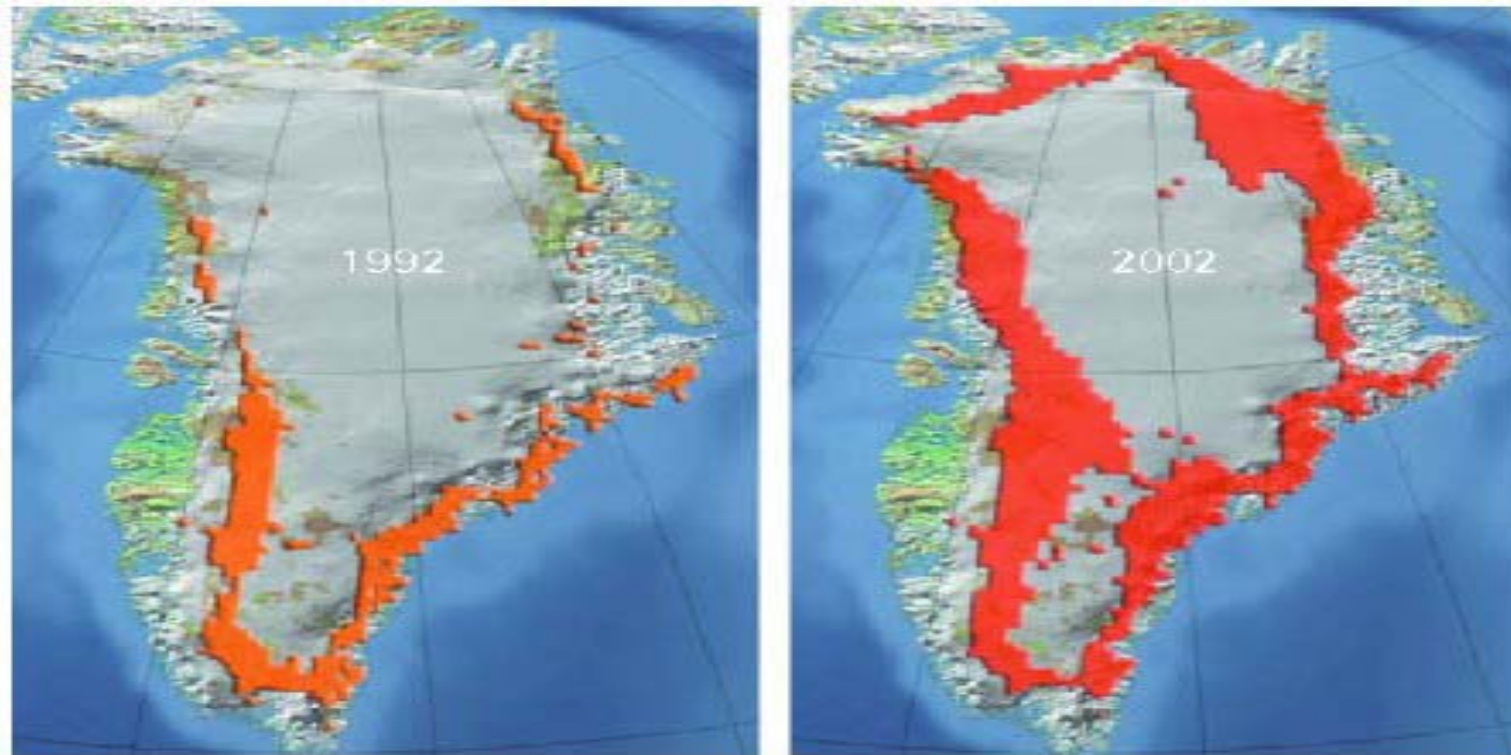
CLIMATE CHANGE – THE FRONT LINE

- More than 3 billion people live within 60km of the sea
 - 250 million in 14 of the worlds largest conurbations
 - Migrations over the next 50 years will increase this to possibly 5.2 billion by 2080.
- Sea levels rose by 20cm in 20th Century
 - now rising at 3mm per annum
 - 1mm rise translates into 1-5m retreat of coast
 - Increased threat from storms and surges.
- Concern for the low lying areas particularly Bangladesh, Pacific Islands and Maldives.

GOING UNDER – THE CONSEQUENCES

- Predictions of 1 – 2 m sea level rise this century as Greenland melts.
- In UK estuary cities and Fens/Broads would be badly affected.
- 1m sea level rise will threaten 1 billion people and $\frac{1}{3}$ of worlds agricultural land.
- 1.5m rise would see Netherlands, Shanghai, Cairo Tokyo, New York etc badly affected.

GOING UNDER?

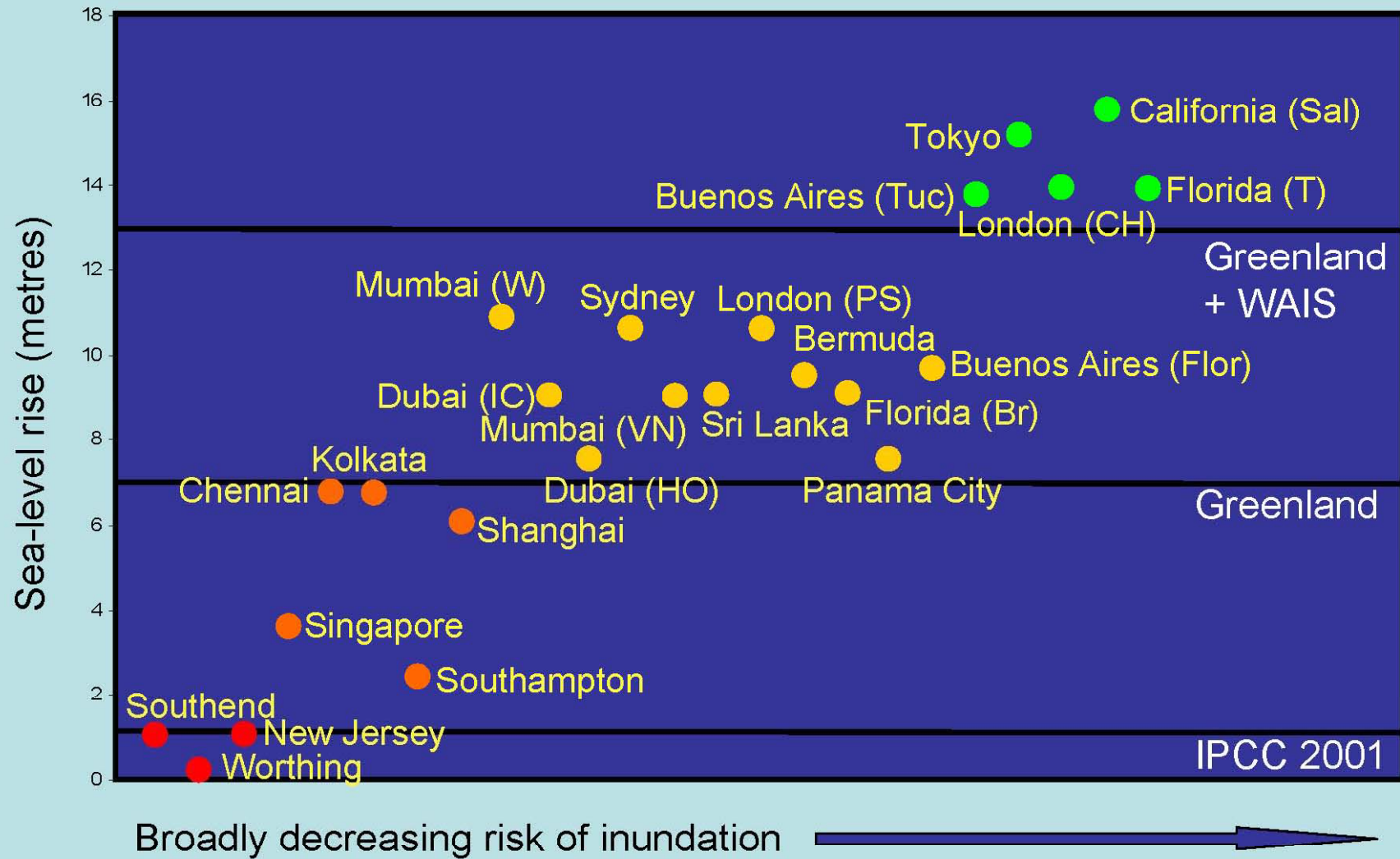


Greenland summer melt zone

SEA LEVEL IMPACTS

- Study underway identifying all sites within 50 kms of coast, including UK.
- All sites located at height, above existing sea level.
- Time lines based upon existing predictions to determine when no longer viable to stay.
- Link with our Estates Department on Tenure.
- Impact on work force and loss of skills.
- Thames Barrier – cannot rely forever.

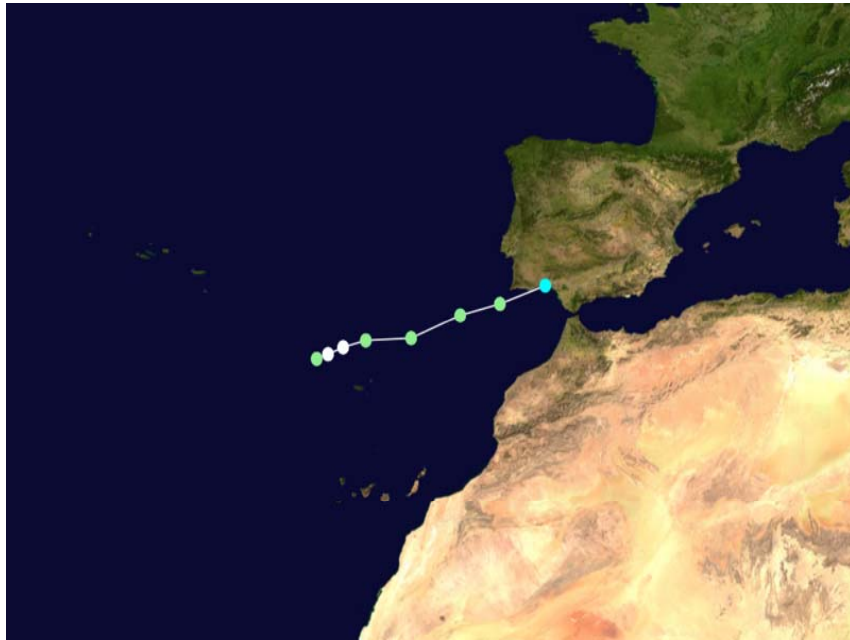
Risk to HSBC centres from rising sea levels



WIND ACTIVITY - CHANGES ALREADY WITH US

- 2005 hurricane season the worst on record with Katrina a clear example of impact and risks.
- Typhoon/cyclone activity in Pacific and Indian Oceans increasing.
- Tornado activity in US at record proportions.
- 2-3°C sea temperature rise would see 30% of storms reach category 4 or 5 hurricanes with 6% rise in peak wind speeds.
- Hurricane tracks showing signs of moving further north.

Today: the hurricane debate and signs of things to come



Track of Hurricane Vince: October 2005

- Furthest N and E Tropical cyclone in Atlantic (Vince)
 - First TC to strike Iberian peninsula (Vince)
 - 2004 season: Hurricane Caterina (Brazil)
 - Latest end to hurricane season: Jan 5th

BUILDING STRUCTURES

- Increased wind speeds are impacting our key building constructions in certain geographics.
- Hurricane areas having in built protective measures.
- Increased power demands causing us to consider generator provision and fuel capacities.
- Strategic locations near to flood plains under review.

REGIONAL REPORTS

- Impacts in key Regions for HSBC and Global trade.
- India, China and Brazil.
- What happens as climate changes affect water shortages, population migration , reduced food etc.
- Consider in our future strategy.

SUMMARY

- We are experiencing it already with hurricanes, flooding, power shortages v demand.
- We have to take a strategic view and plan, on best assumptions for next 25, 50 & 100 years.
- Environmentally friendly approaches should be second nature and for HSBC customer consideration.
- Should progressively be part of Business Impact Analysis, Risk Assessments and Business Continuity plans.