Fact

If the sea level were to rise just four metres due to climate change, almost every coastal city in the world would be inundated.

From: Financial Risks of Climate Change, Association of British Insurers, June 2005
Cost of Great Weather Disasters 1950-2010

Great natural catastrophes worldwide 1950 – 2010
Overall and insured losses with trend

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Building in the Right Place

From: Availability and Affordability of Insurance Under Climate Change – CERES 2006

Figure 12. Coastal inundation arising from increases in sea level. Includes only the effect of the thermal expansion of warming ocean waters. Excludes sea-level changes due to melting continental ice sheets.
Role of Adaptation

• If no action is taken, losses from coastal flooding for high risk properties could double by 2030. Therefore, adaptation is vital

• With an effective adaptation strategy, future losses can be reduced to below present day levels
  – The losses for high-risk properties could be reduced by 70% through using flood defences together with flood resilient and flood resistant measures.

Coastal communities and climate change: Maintaining future insurability
Lloyds and RMS, 2008
Adaptation Works

Homeowners in Florida could reduce losses from a severe hurricane by 61 percent, resulting in $51 billion in savings, simply by building to strong construction codes.

Wharton Risk Management and Decision Processes Center, University of Pennsylvania.

“Managing Large Scale Risks in a New Era of Catastrophe.” 2007
Adaptation: Case Example

FM Global Insurance Co. –

- 500 properties affected by Katrina
- Loss-prevention requirements in policies
- Experienced one-eighth the losses
- $500 million avoided losses for only $2.5 million invested
Prescription

• Better science and tools for risk assessment and mitigation
• Risk-based land use planning
• Risk-appropriate infrastructure and buildings
• Strengthened ecosystems
• Flexible adaptation
• Viable insurance market
• Climate-respectful investments and lending
Science and Tools

Accurate forecasts/less uncertainty

• Sea level rise/ice sheet breakdown
• Improved storm models/clarify uncertainties
• LIDAR/other data
• High-definition, digital flood and coastal maps
Risk-Based Land Use Planning

Protect development from coastal hazards

- Consider climate change
- No-build/no-rebuild zones
- Incentives to relinquish property or development rights
Infrastructure and Buildings

• Adaptable infrastructure plans
• New approaches (e.g., decentralized systems)
• Building standards reflect climate and other risks
• Low-income retrofit assistance
Strengthened Ecosystems

Make essential natural infrastructure part of any adaptation strategy

Protect and restore these features through adaptation funding, risk-based land use planning, and post-disaster rebuilding
Flexible Adaptation

Amend adaptation plans for higher levels of protection as climate change understanding grows
Viable Insurance Market

Risk-based pricing

Risk Signal

Risk Mitigation

Assist low-income homeowners
Investments and Lending

Risk + Climate Awareness = Resilience/Wise Investment
Blueprint Endorsers

The Resilient Coasts Blueprint was authored and endorsed by the following organizations:

ARUP
Calvert
Center for Clean Air Policy
Fireman's Fund Insurance Company
HARVARD MEDICAL SCHOOL
HVRI
LLOYD'S
MONMOUTH UNIVERSITY
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Resilient Coasts Blueprint

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