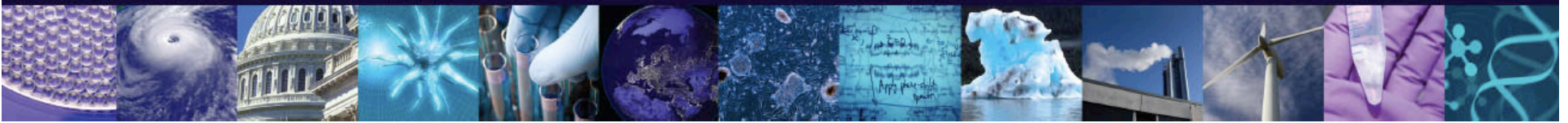


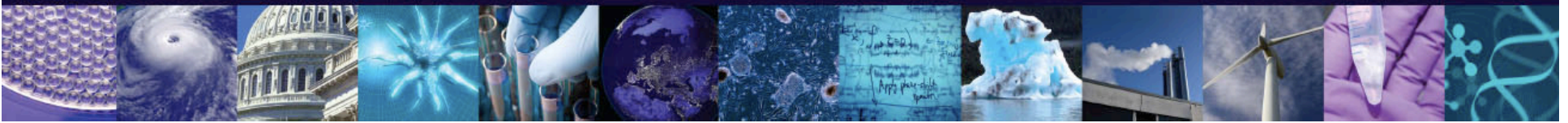
Is this (our) risk? The science and politics of catastrophe insurance

Jessica Weinkle
October 27, 2014



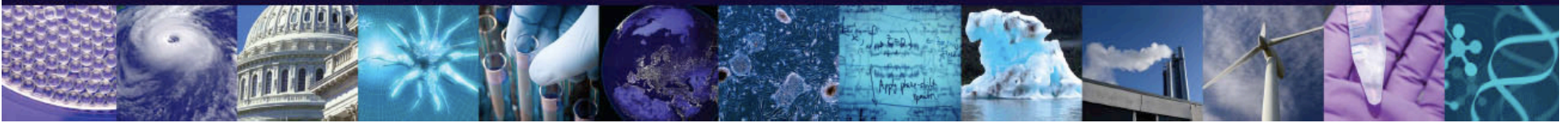
What would you say you do here?





- I study processes of deciding what you pay whatever you do for insurance and why that changes sometimes.
- I do this mainly in regards to insurance for catastrophes- like hurricanes and floods.





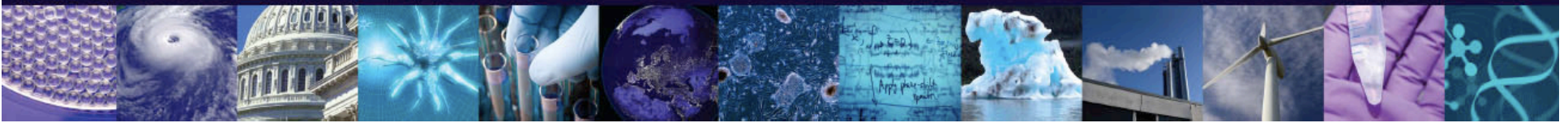
You mean how
they lie?

You mean how I can't
afford coverage?

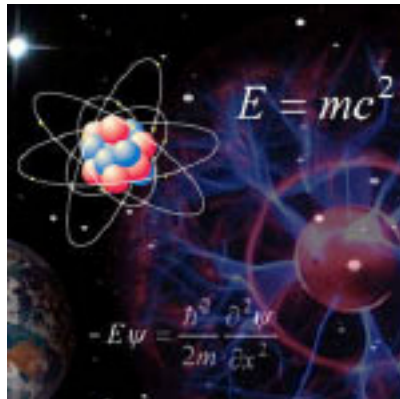
You mean how
disasters are getting
worse?

You mean how they denied
my claim?

You mean how our
nation has too much
debt?

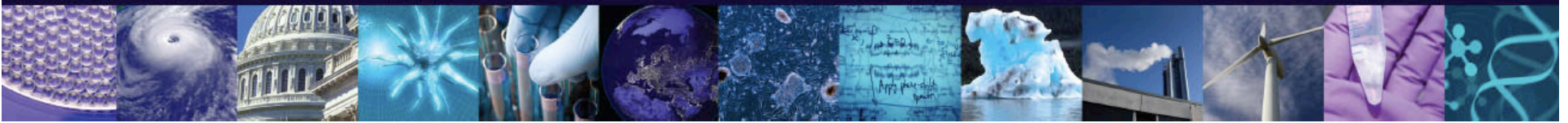


What people think happens (part 1)



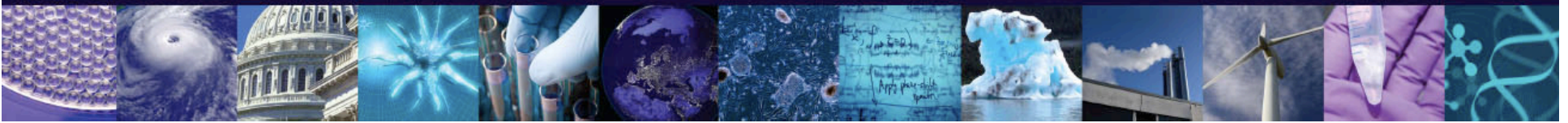
#





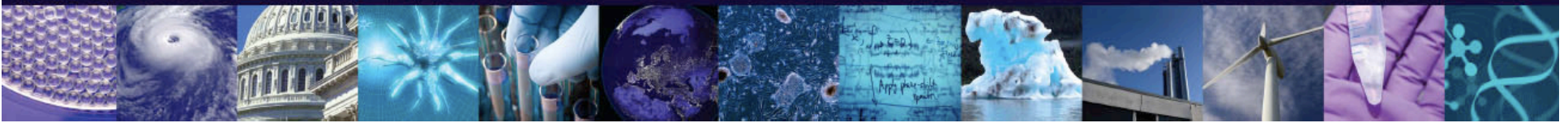
What people think happens (part 2)





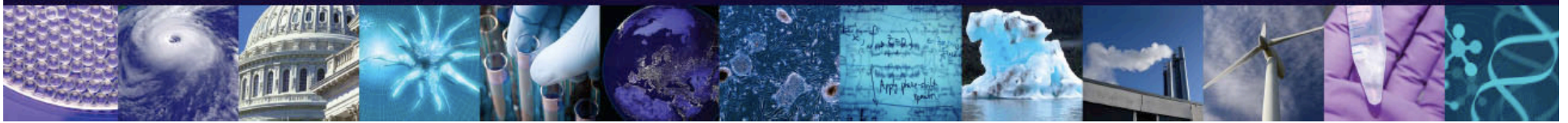
What really happens





Worst Case Scenario

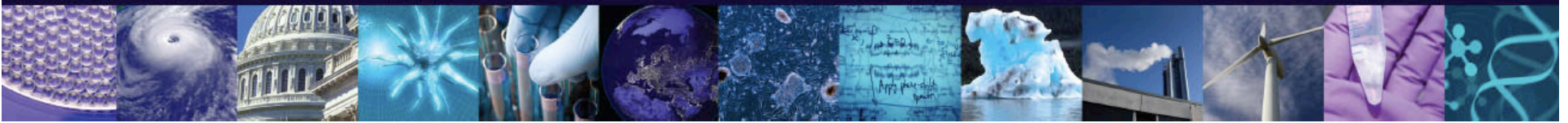


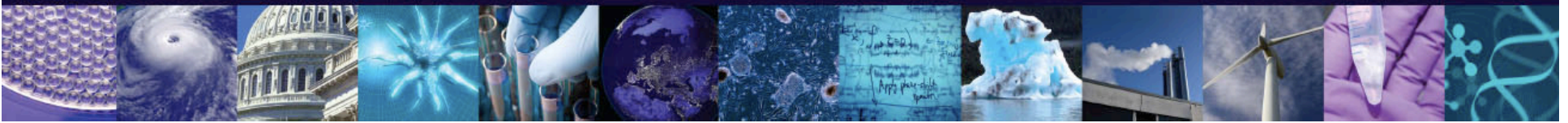


Public Insurance Programs

- “affordable property insurance”
 - Florida’s Citizens Property Insurance Corporation
 - FL STAT 627.351

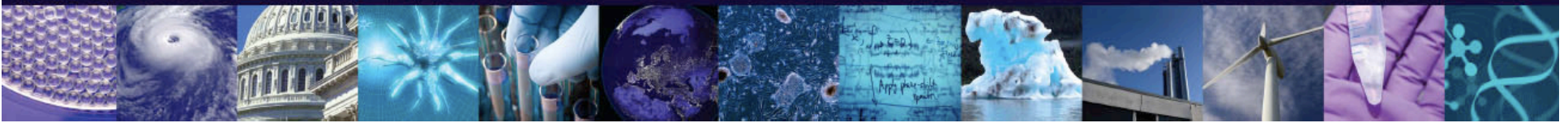
- “distributing burdens equitably among those who will be protected by flood insurance and the general public”
 - National Flood Insurance Program
 - 42 U.S. Code § 4001





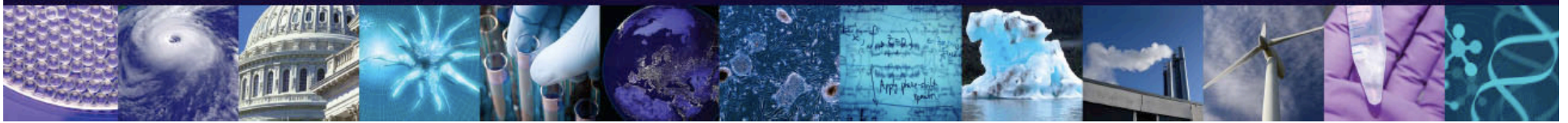
Three separate but interrelated processes

- Constructing
- Characterizing
- Governing



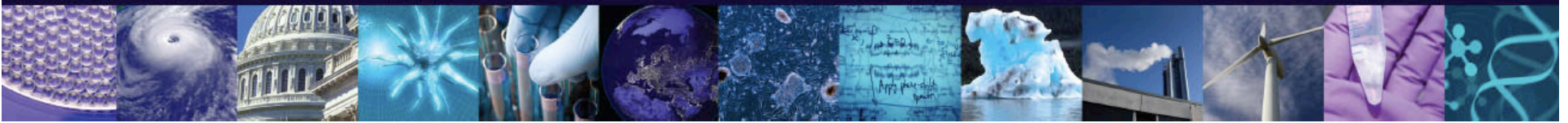
Constructing





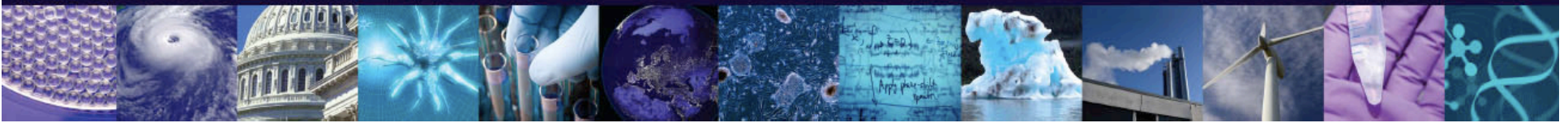
Constructing





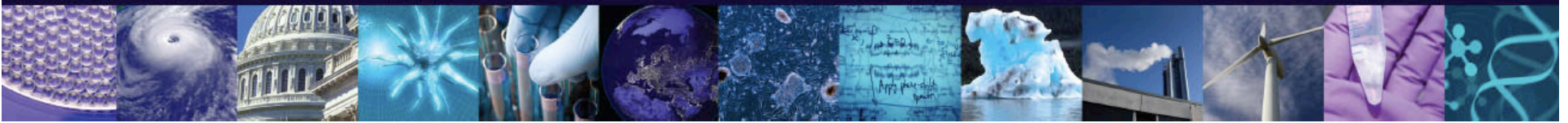
Characterizing





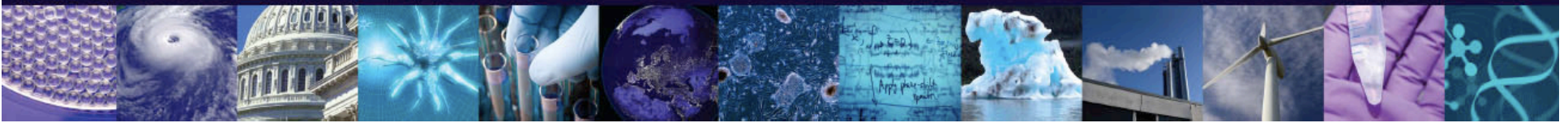
Constructing





Governing

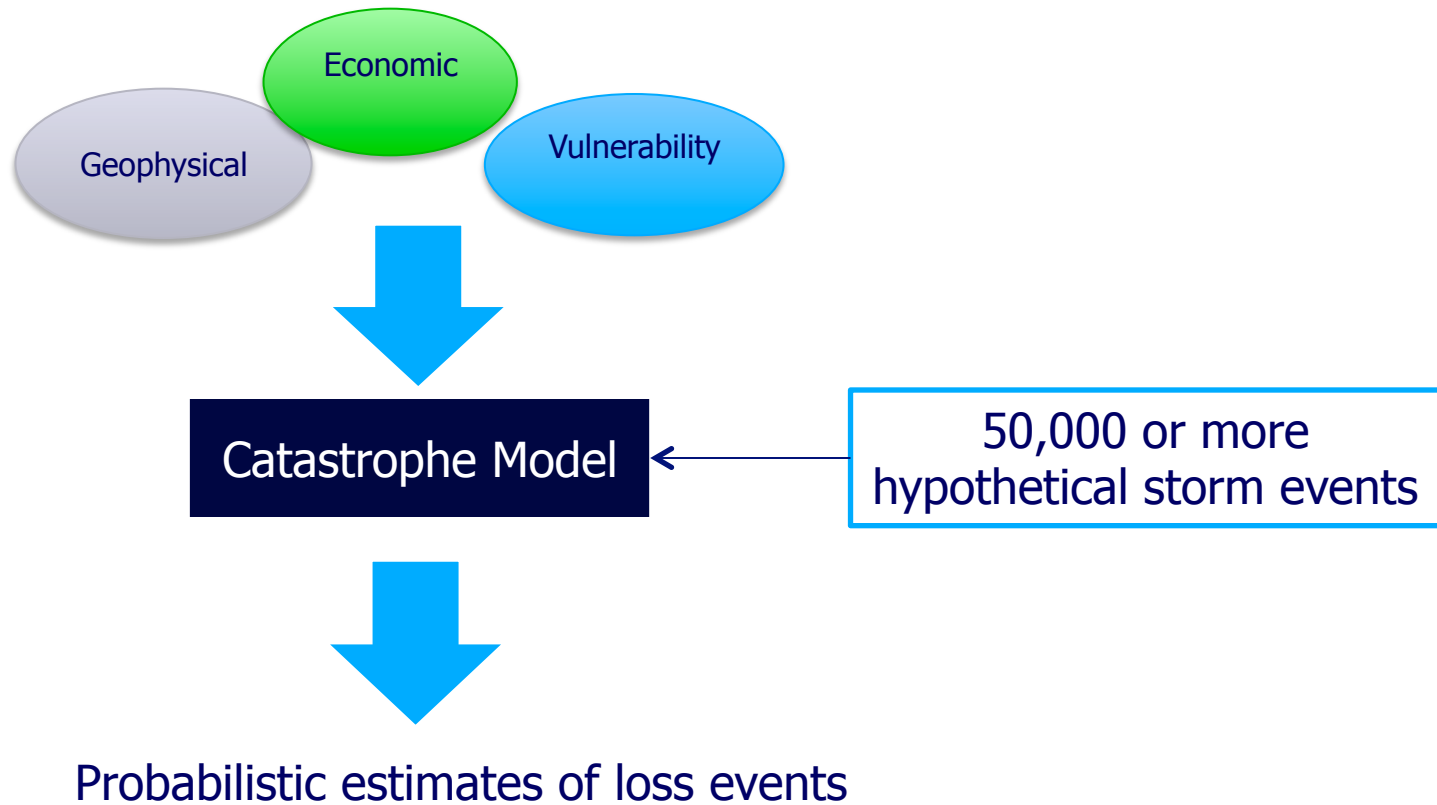
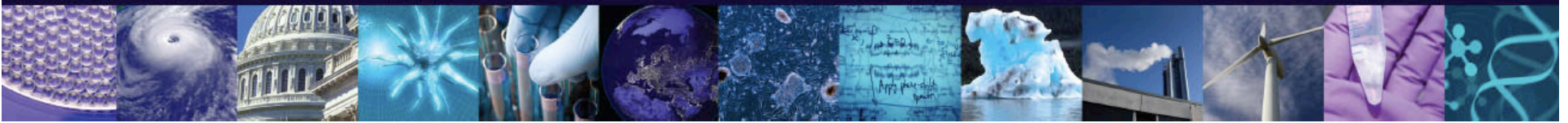


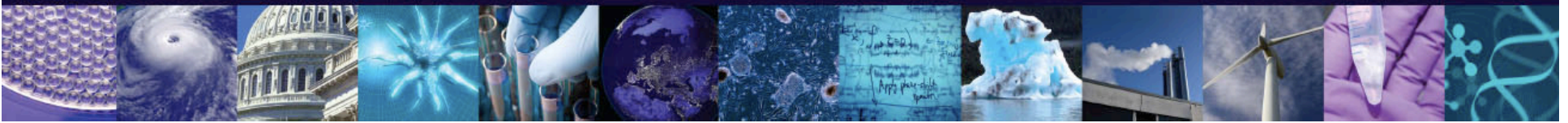


Governing

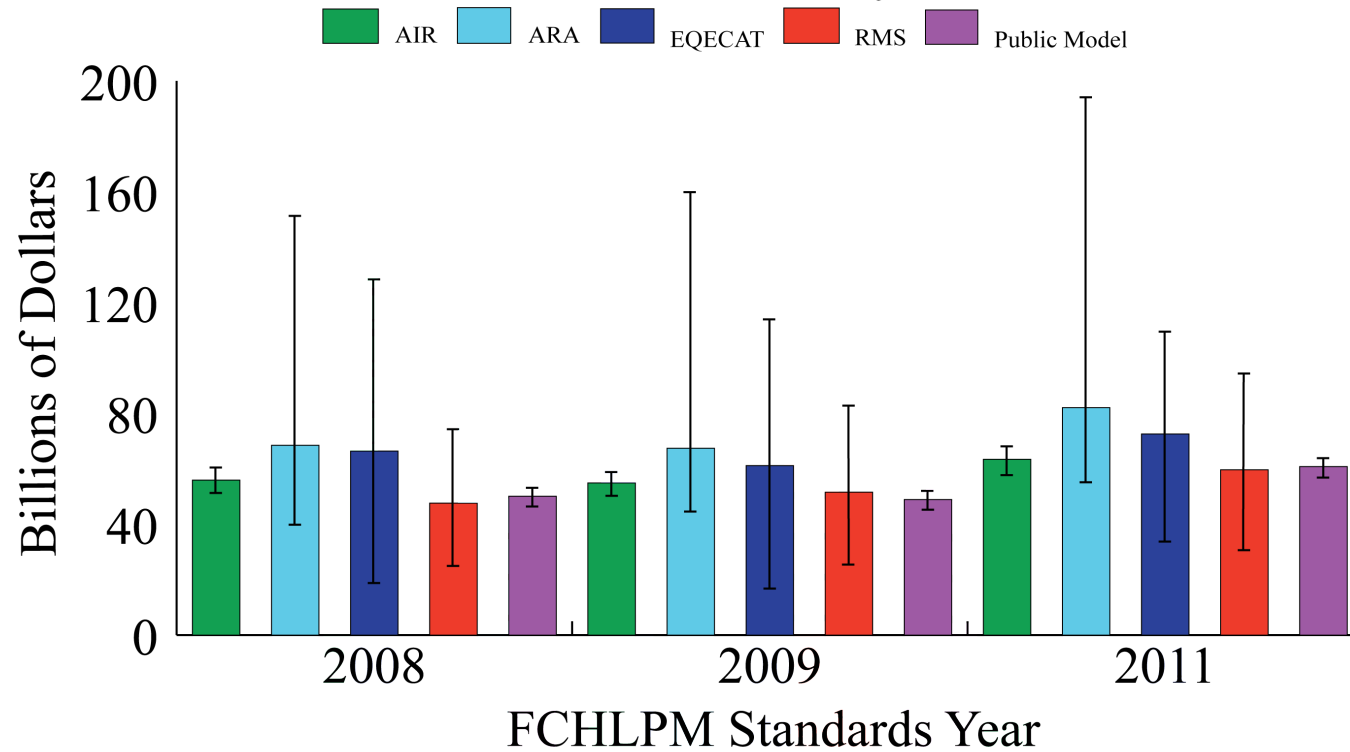
- Decisions make risk 'real' in so much that you then have to pay for it

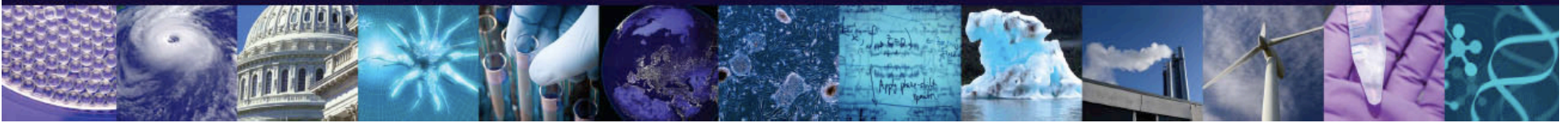






100 PML and Uncertainty Intervals



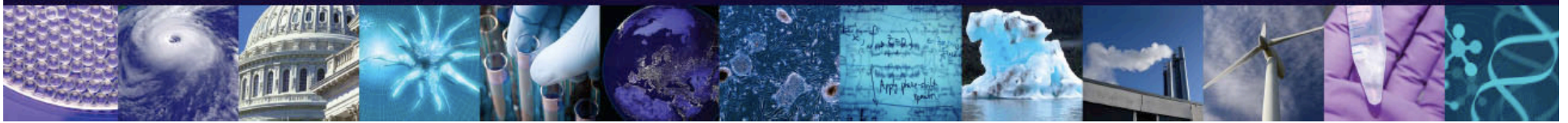


Kinda true, I guess... I feel like, maybe?

- “a ‘stylized’ view of the facts”

— Kaldor (1961)





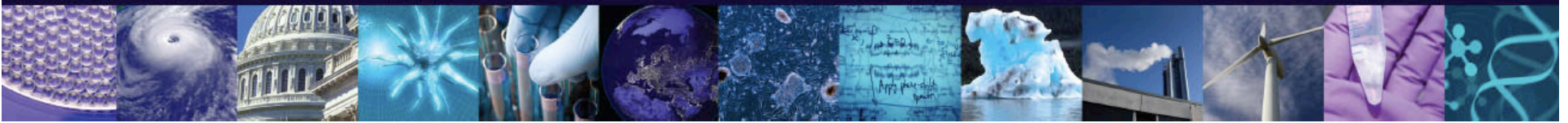
Is model output subject to evaluation on time scales of decision making?

■ No

- Not a prediction
- Represents an average value over the long run
- Cannot provide the right answer

■ Yes

- Estimate of future events
- Used in day-to-day decision making
- Powerful



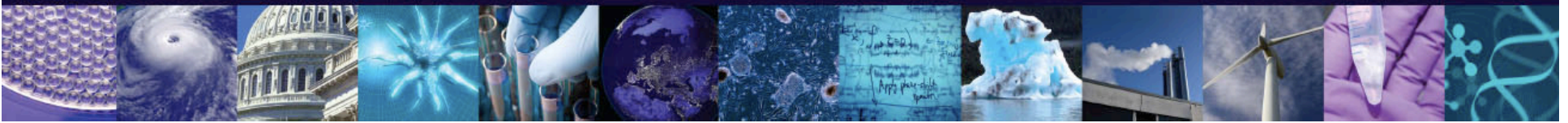
They matter in the short run

■ 2006 RMS

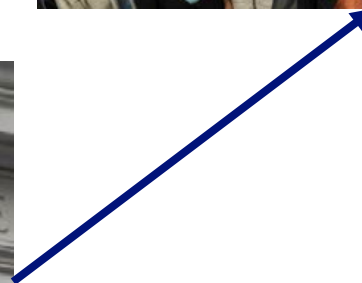
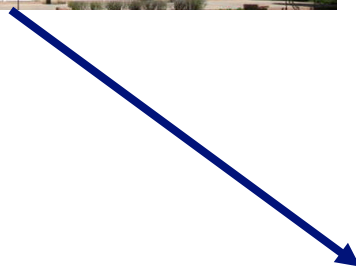
- “a new understanding of hurricane risk”
 - Muir-Woods 2006
- 30% increase in landfall activity

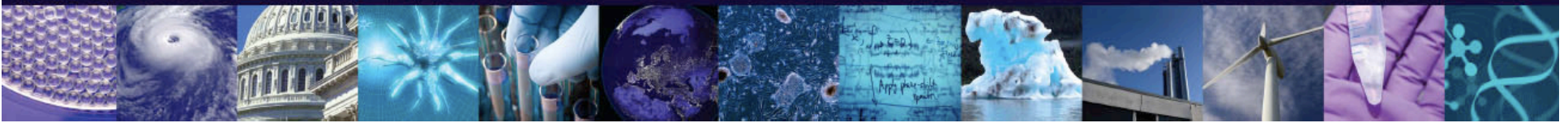
- \$82 billion increased demand on premiums over 5 years





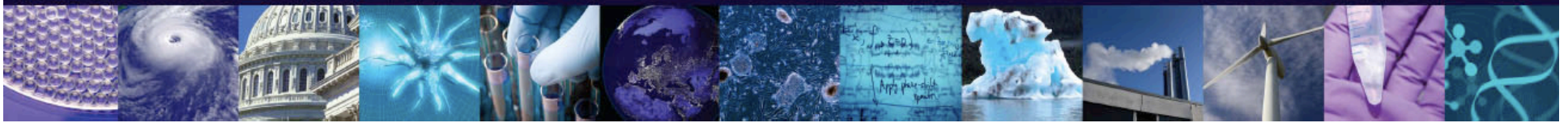
The relationship between science and insurance





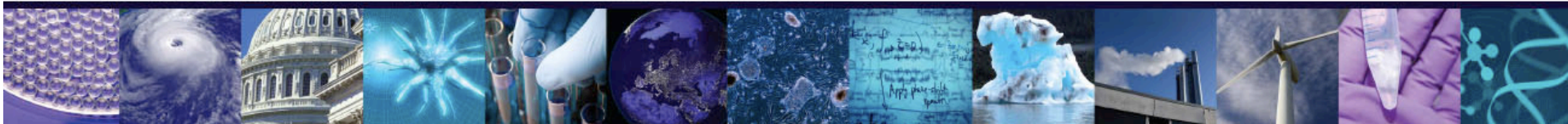
Societal Benefit?

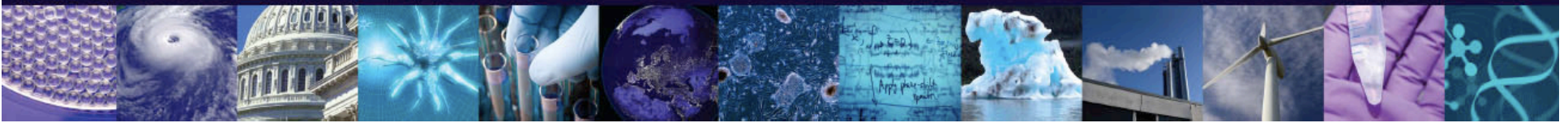
- Most recent economic crisis
- Solvency II
- The hurricanes that haven't



Why bother?







A moving target

% difference between catalog options		
	V 2010	V 2011
All US	19%	21%
FL Gulf Coast	8%	24%

Lloyd's Market Association 2012

% change between years		
	Cat 1-2	Cat 3-5
US	-15%	-10%

Willis Re 2013