

A close-up, low-angle shot of a wind turbine's hub and blades, rendered in a monochromatic teal color. The hub is a complex metal structure with several bolts, and the blades extend upwards and outwards. The background is a soft, out-of-focus light blue.

# Insurance and Sea Level Rise

Keith McCue  
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# Should I Build a House Here?

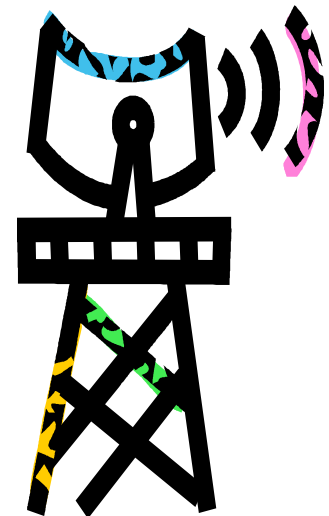
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# Threat of Sea Level Rise

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- Sea level rise significantly increases the risk of damage in coastal communities
- Often, this increased risk is not being reflected in insurance premiums due to subsidies
- Insurance companies are best situated to evaluate and price this risk
  - For less frequent and more severe events, such as hurricanes, reinsurance companies send an additional price signal to insurance companies in the form of reinsurance premiums



## Definition of Subsidy

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- Subsidy – Fiscal Definition - A government expenditure, tax exemption, or assumption of liability which decreases the cost of producing a specific good or service
- Subsidy – Environmental Definition – An uncompensated environmental damage arising from any flow of goods and services
  - Ex. - harvesting a forest without reforestation, or without recognizing cost of deforested environment

### Results:

- Producer = higher profit
- Consumer = lower price
- Everyone = degraded environment

# Insurance Subsidies Amplify Impact of Sea Level Rise

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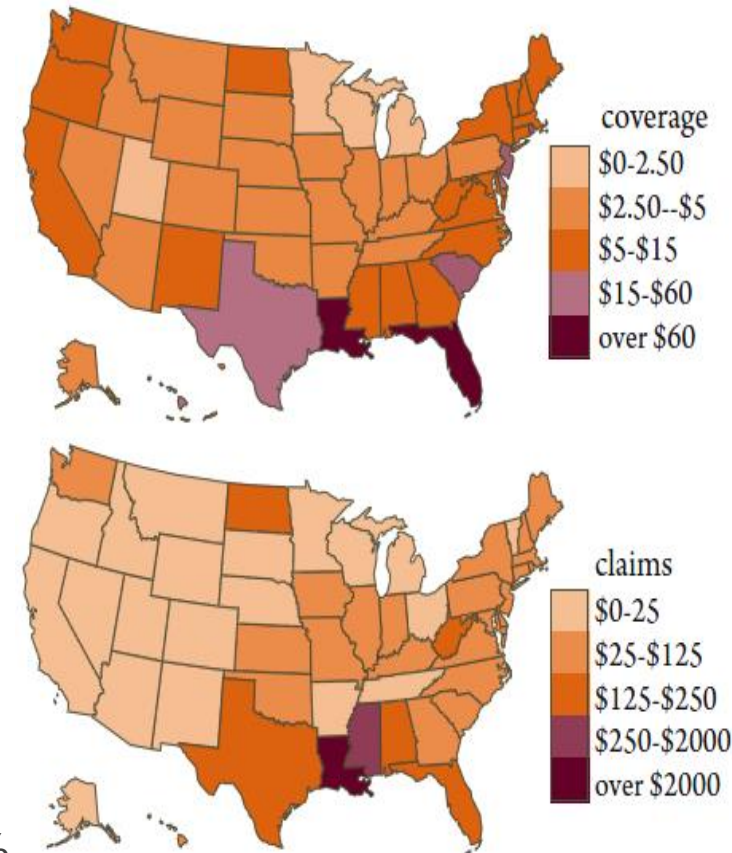
- Insurance subsidies inhibit risk signaling role of insurance
  - Consumers cannot evaluate the full economic impact of their choices
- Outcome is increased (and economically inefficient) demand for a good (such as beach houses) in areas most affected by sea level rise



# NFIP Subsidies

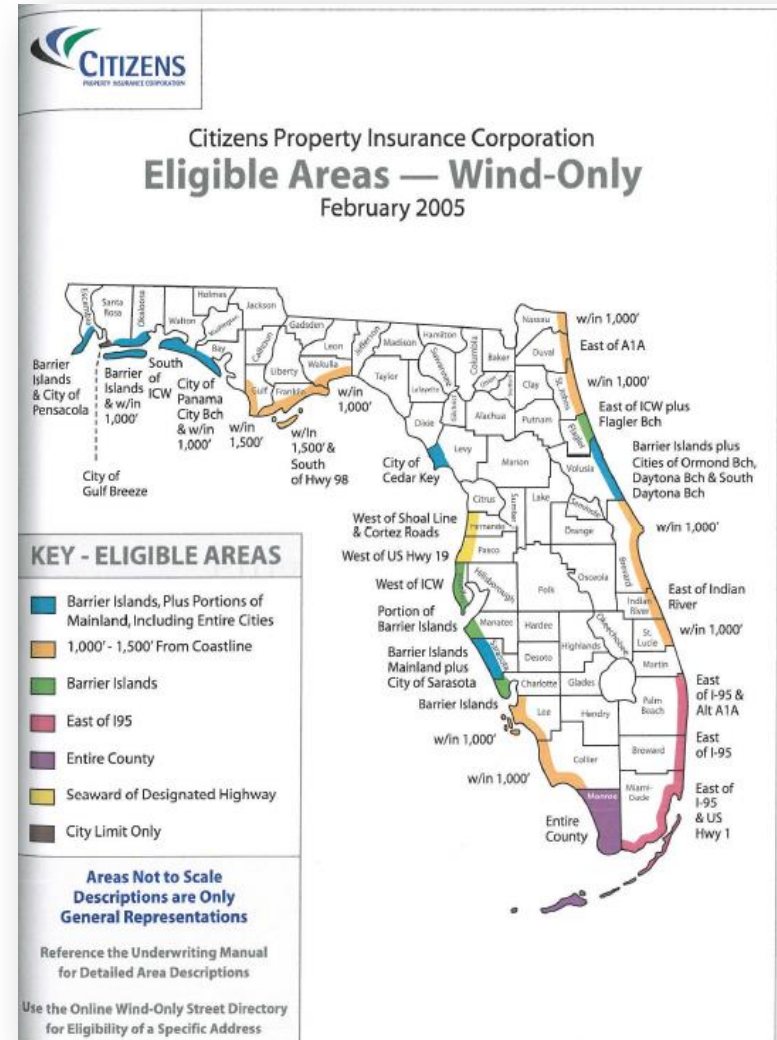
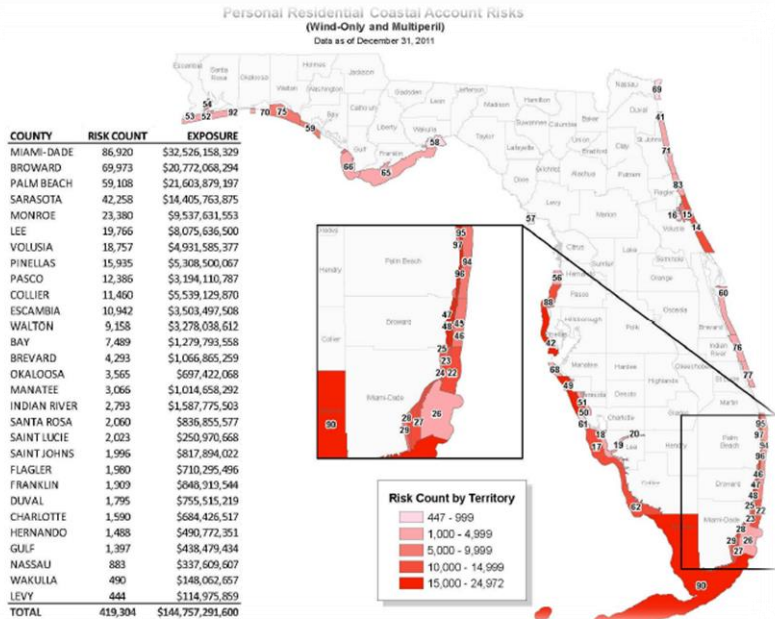
## ■ NFIP

- Subsidized policies are priced at 40% of actuarial sound rate
- Florida - \$471 billion of insurance for \$1 billion premium (avg.= \$489)
- Miami-Dade County – 200k policies at avg. premium of \$355
- Congressional Budget Office:
  - 40% of coastal properties receiving rate subsidy are worth over \$500,000, 12% over \$1 million
  - 23% of subsidized coastal homes are vacation homes
  - 50% of NFIP houses are in FL or TX
  - 25% of FL & LA homeowners have NFIP (4% nationwide)



# Citizens Property Insurance Company

- Citizens subsidizes building in the areas most affected by sea level rise
- Citizens policies on average are priced at 65% of actuarial sound rate
- 1.22 million policies; >\$350 billion insured
- Almost \$3 Billion premium - One of top ten P&C insurers in US





## Adding up Florida Coastal Subsidies\*

Policy	Citizens	NFIP	Total
(1) Avg Premium	\$2,000	\$500	\$2,500
(2) Est. Unsubsidized Premium	\$3,100	\$1,250	\$4,350
(3) Adjusted for Cat Fund	\$3,645	\$1,250	\$4,895
<b>Total Subsidies</b>	<b>\$1,645</b>	<b>\$750</b>	<b>\$2,395</b>
<b>%</b>	<b>82%</b>	<b>150%</b>	<b>96%</b>

- Over the life of a 30 year mortgage, this subsidy adds up to **\$71,850**
- This number is based on statewide averages and is likely understated for coastal properties by 2-3 times

\*All numbers are estimates based on 2012 statewide averages and are intended for illustrative purposes only.  
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Renaissance Reinsurance Ltd.

*RenaissanceRe*

Renaissance House  
12 Crow Lane  
Pembroke HM19  
Bermuda

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