

# Managed Retreat and Community Relocation *in North America*

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## Managed coastal realignment projects in the UK: 'working with nature'

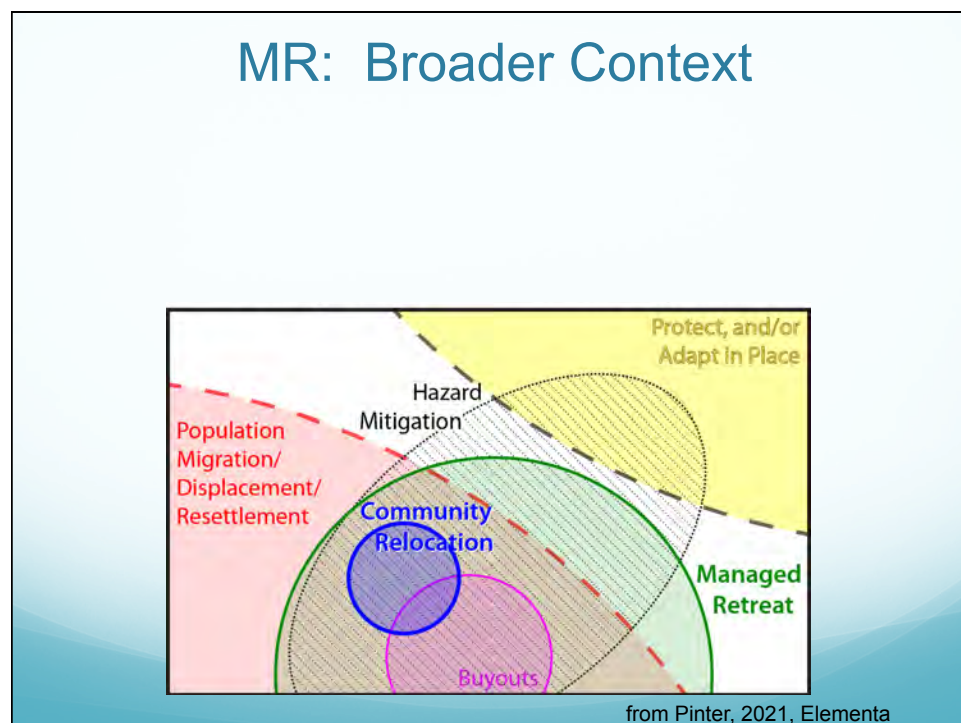
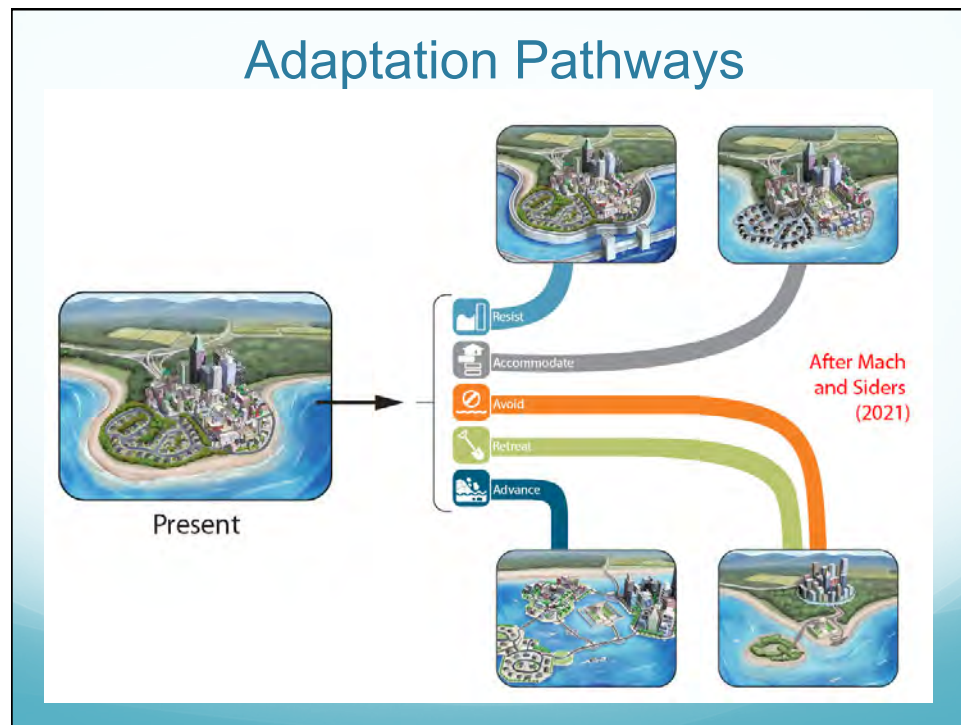
**Prior to  
realignment**  
Coast defences present  
Little intertidal habitat



**Managed  
realignment**  
Coast defences breached  
Creation of intertidal habitat



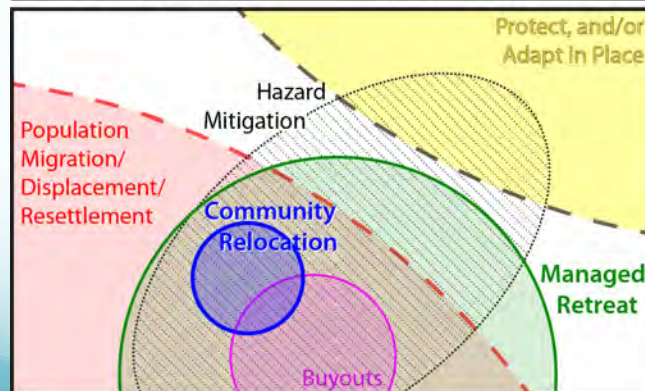
from CoastAdapt.com.au



## MR: Broader Context

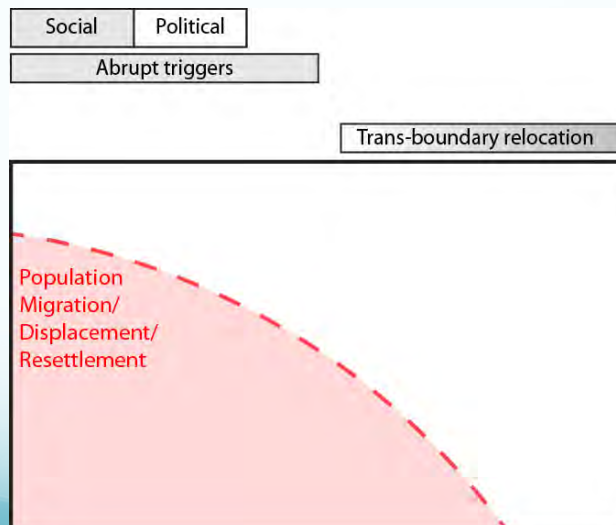
### Migration/Adaptation Drivers

Social	Political	Env./Climatic	Economic	Demographic
Abrupt triggers			Chronic pressure	
Top-down motivation			Bottom-up motivation	
Local displacement			Trans-boundary relocation	



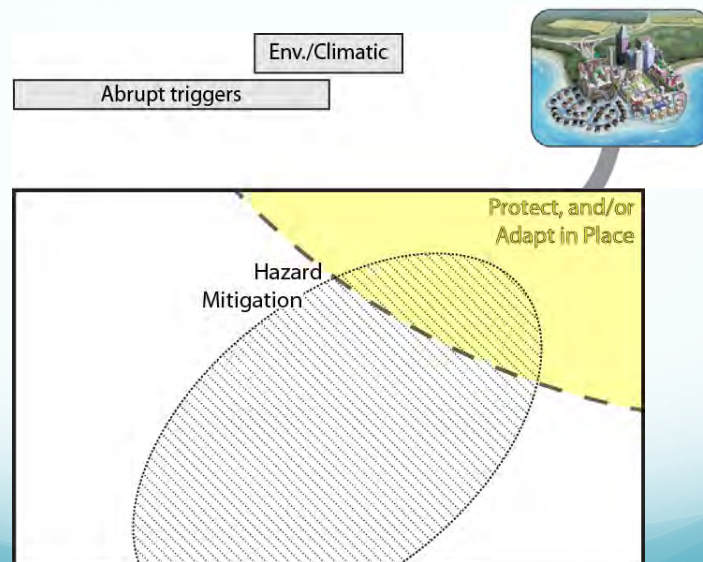
from Pinter, 2021, Elementa

## Other types of population Displacement





## Adaptation: Structural Elevations

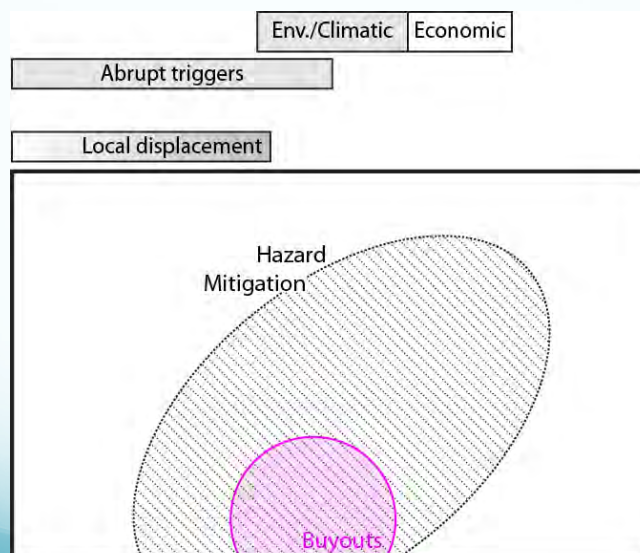




## Adaptation: **Structural Elevations**



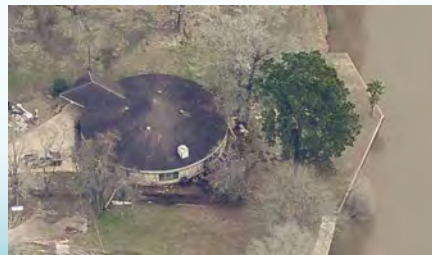
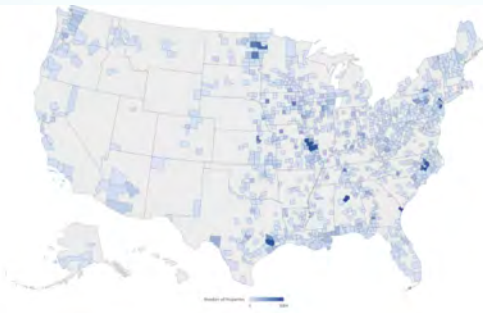
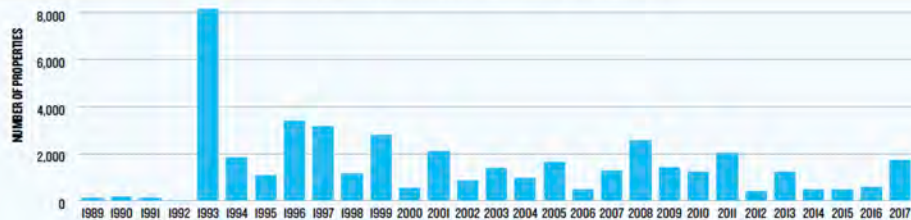
## Retreat through Piecemeal **Buyouts**



from Pinter, 2021, Elementa

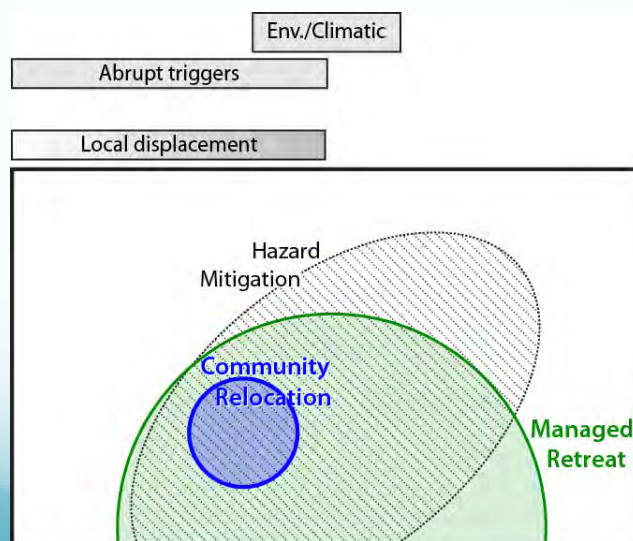
## Retreat through Piecemeal Buyouts

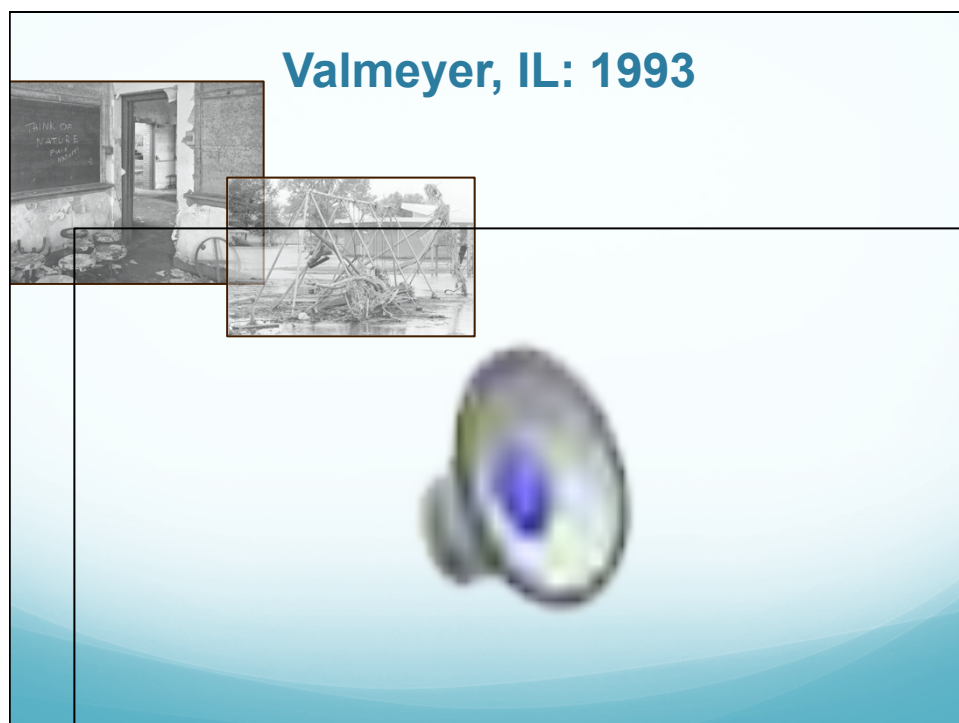
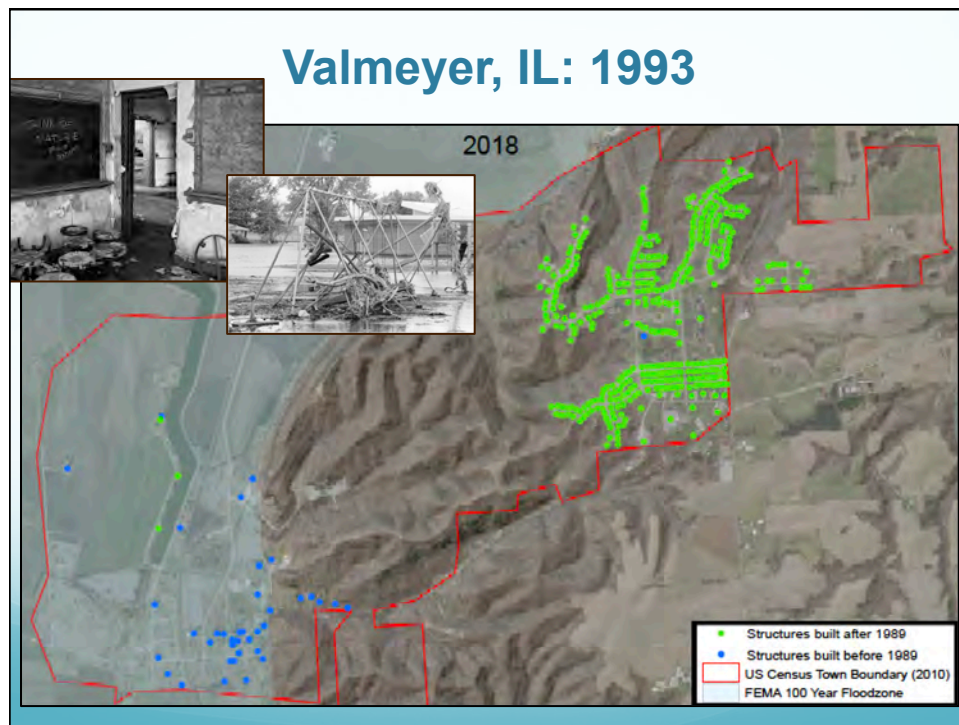
FIGURE 1: FEMA-FUNDED BUYOUTS, FISCAL YEARS 1989–2017



from Weber and Moore, NRDC, 2019

## Retreat through Community Relocation



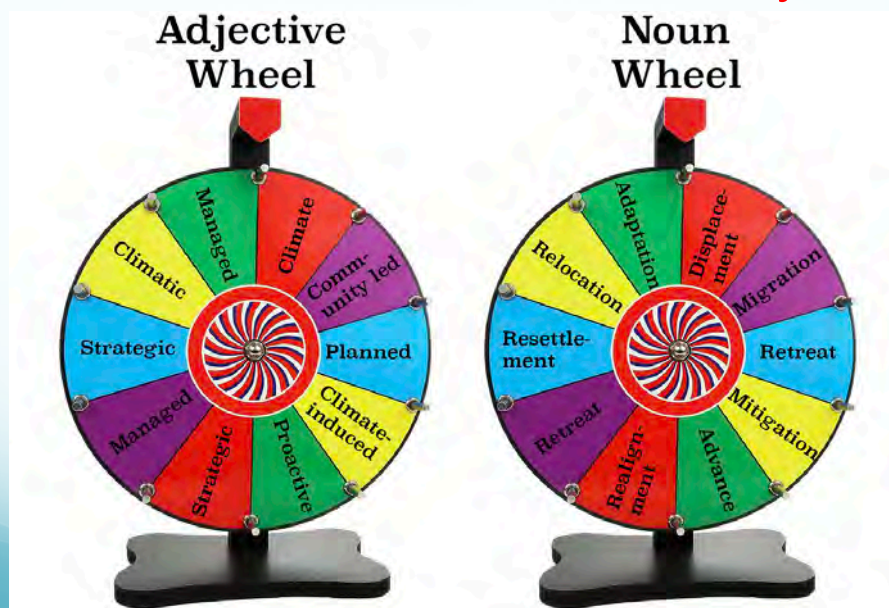




## Recent Focus on Vocabulary



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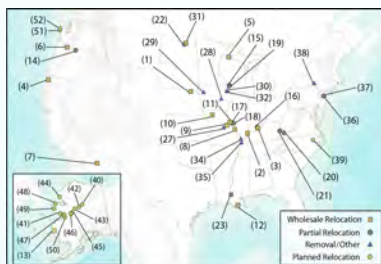


## Managed Retreat

### The Need:

By 2100, nearly 500 US coastal communities and 4.2 million residents may face disruptive inundation, and flood damages globally may increase 160-240% and flood fatalities by 70-83%

## History of US Managed Retreat



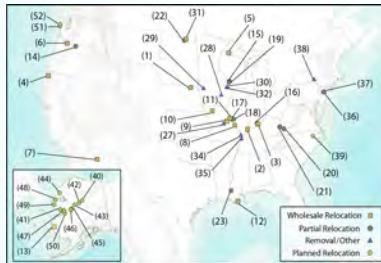
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### Actionable Resources:

The US history of MR represents \$millions of taxpayer investment, hard-won lessons learned, and **living expertise** in planning and implementing such projects.

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## Niobrara, Nebraska Missouri River, 1881

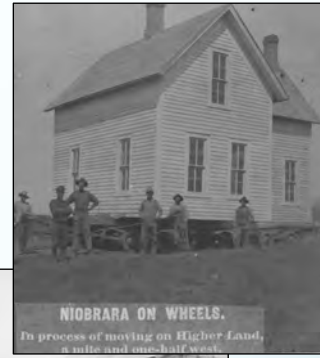


### 475 inhabitants (1880):

3 general stores,  
2 drug stores,  
2 hardware stores,  
1 harness shop,  
2 blacksmiths,  
5 hotels,  
3 physicians,  
1 school,  
1 church,  
2 newspapers

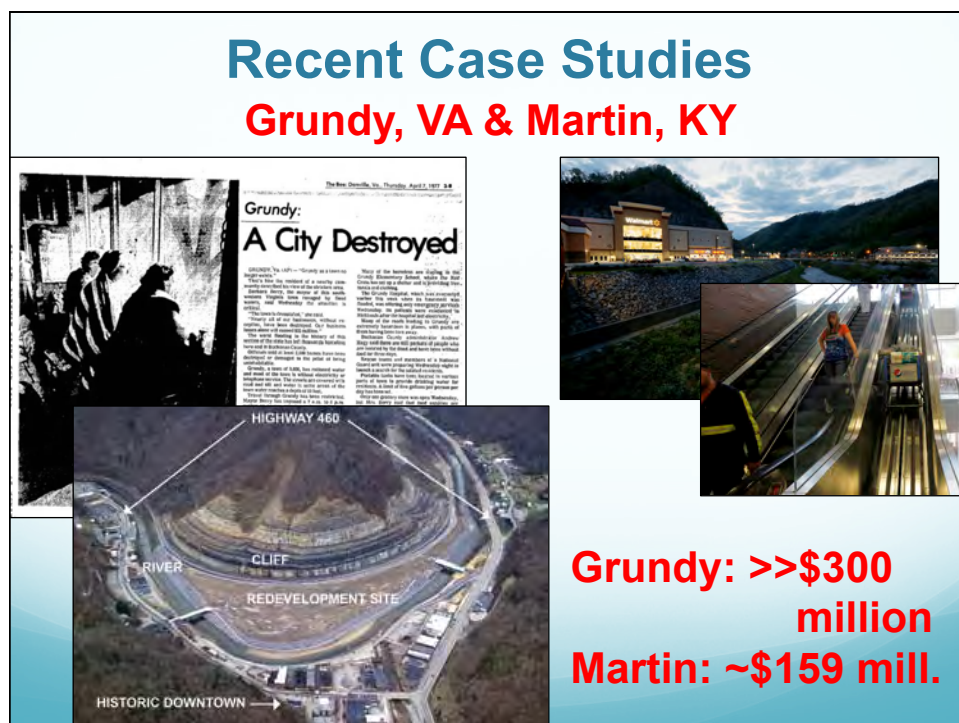
MAIN ST., LOOKING WEST NIORARA NEB.

## Niobrara, Nebraska Missouri River, 1881



## The Great Ohio River Flood, 1937: Shawneetown, IL & Leavenworth, IN

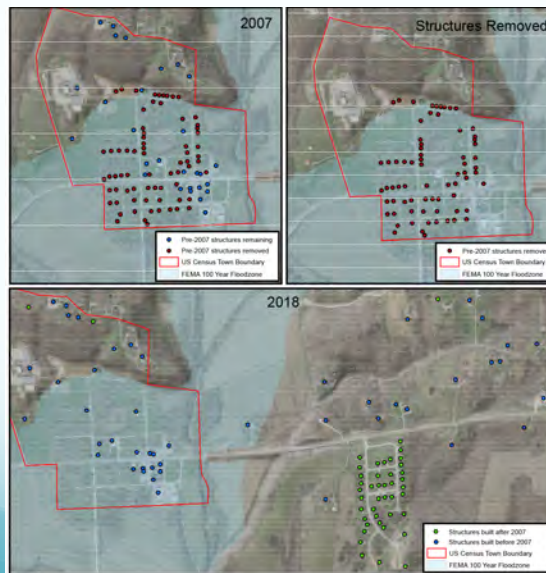






## Recent Case Studies

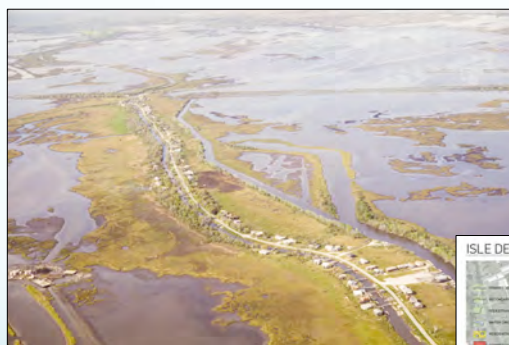
### Silex, Missouri



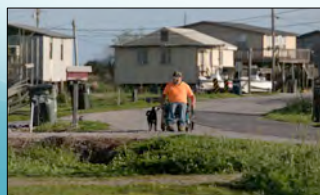
**\$3.2  
million**

## More Recent Case Studies

### Isle de Jean Charles



In 2016, **Isle de Jean Charles, LA** was awarded \$52 million from the NDRC for resettlement

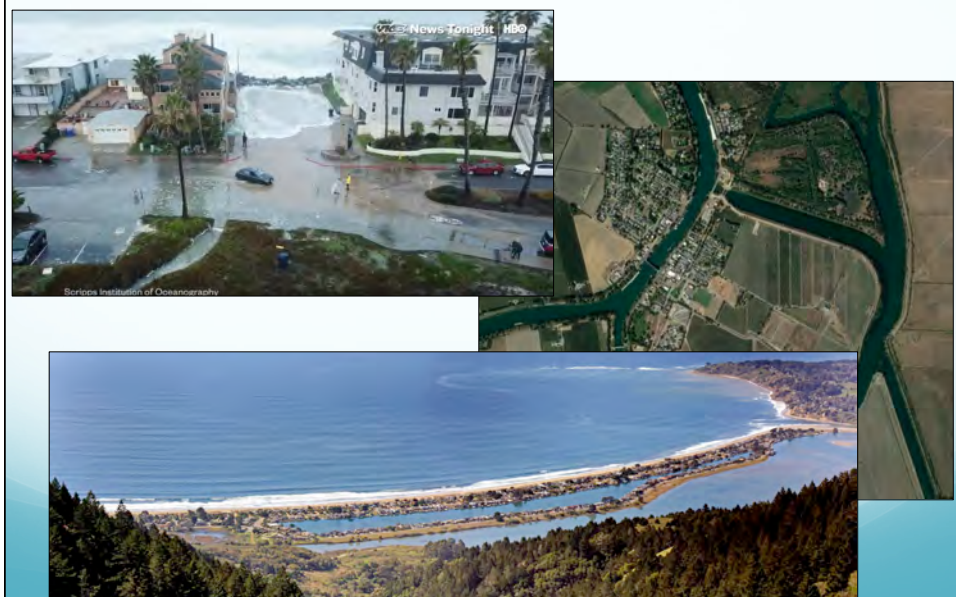


## More Recent Case Studies

At least 12 Alaskan Native villages in stages of relocation or planning



## Managed Retreat in California?



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## Status of US Managed Retreat Today

**"Retreat has [become] a deprioritized, politically perilous option."**

Mach & Siders, 2021




## GOAL of Managed Retreat

-  Economic security
-  Disaster risk reduction
-  Social cohesion (justice, culture)
-  Environment (livelihoods, nature)



After Mach and Siders (2021)

## A Resiliency “Hypocratic Oath:”

-  Disaster risk reduction
-  Economic security
-  Social cohesion (justice, culture)
-  Environment (livelihoods, nature)



**First, reduce the risk...**



## A Resiliency “Hypocratic Oath:”



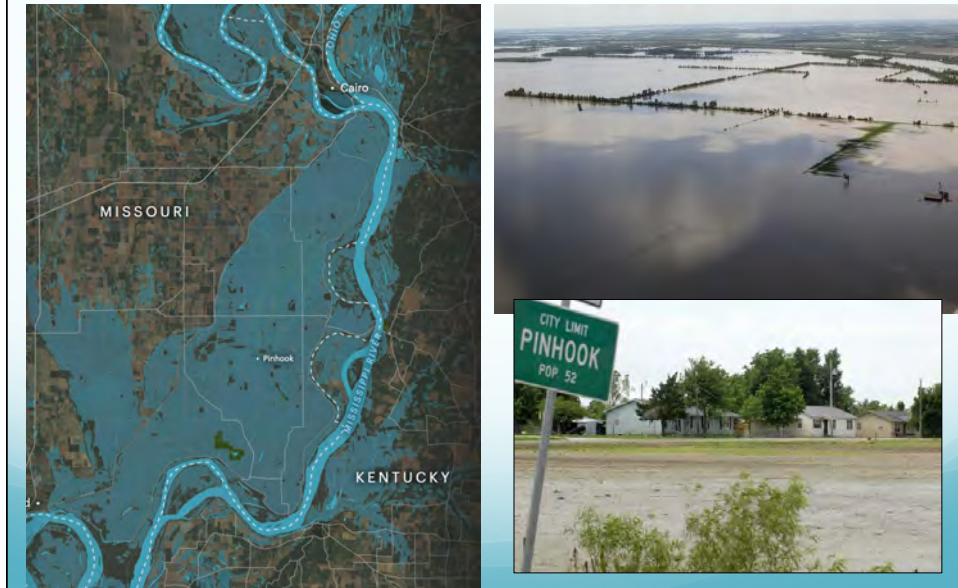
**First, reduce the risk...**

**and assure that projects are equitable and economically and environmentally positive**





## MR & Social Equity



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From left, Twan Robinson, Mary Strayhorn, Aretha Robinson, Dora Brown, Lester Dunagan, George Williams, Debra Robinson Tarver and Walter Cooper prepare to dig at a groundbreaking ceremony Jan. 26, 2018, in Silkeston, Missouri, where seven former Pinhook residents will get new homes. (Ben Matthews)



Lester Miller with Menashaite Disaster Services operates a power trowel Jan. 26, 2018, at the site of a future home for former Pinhook residents in Silkeston, Missouri, as Pinhook residents mingle in the background after a groundbreaking ceremony. (Ben Matthews - Southeast Missourian)