

iCAR PHASE V

REPORTS FROM THE FRONTIER III
PATHWAYS TO CHANGE:
POLICY AND ACTION FOR RESILIENCE

October 29 – 30, 2019
USF St. Petersburg
University Student Center (USC Ballroom)

iCAR



UNIVERSITY OF
SOUTH FLORIDA
ST. PETERSBURG

OPEN
Open Partnership Education Network



UNIVERSITY OF
SOUTH FLORIDA

TAMPA BAY
REGIONAL PLANNING COUNCIL



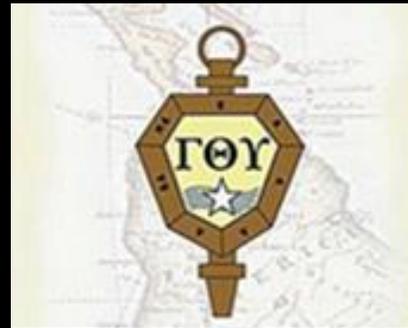
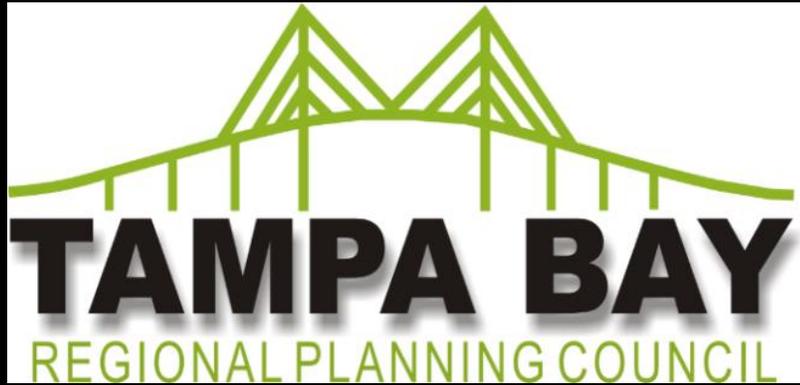
Dewberry



Day 1: October 29

Tentative Agenda: Translating Science into Policy

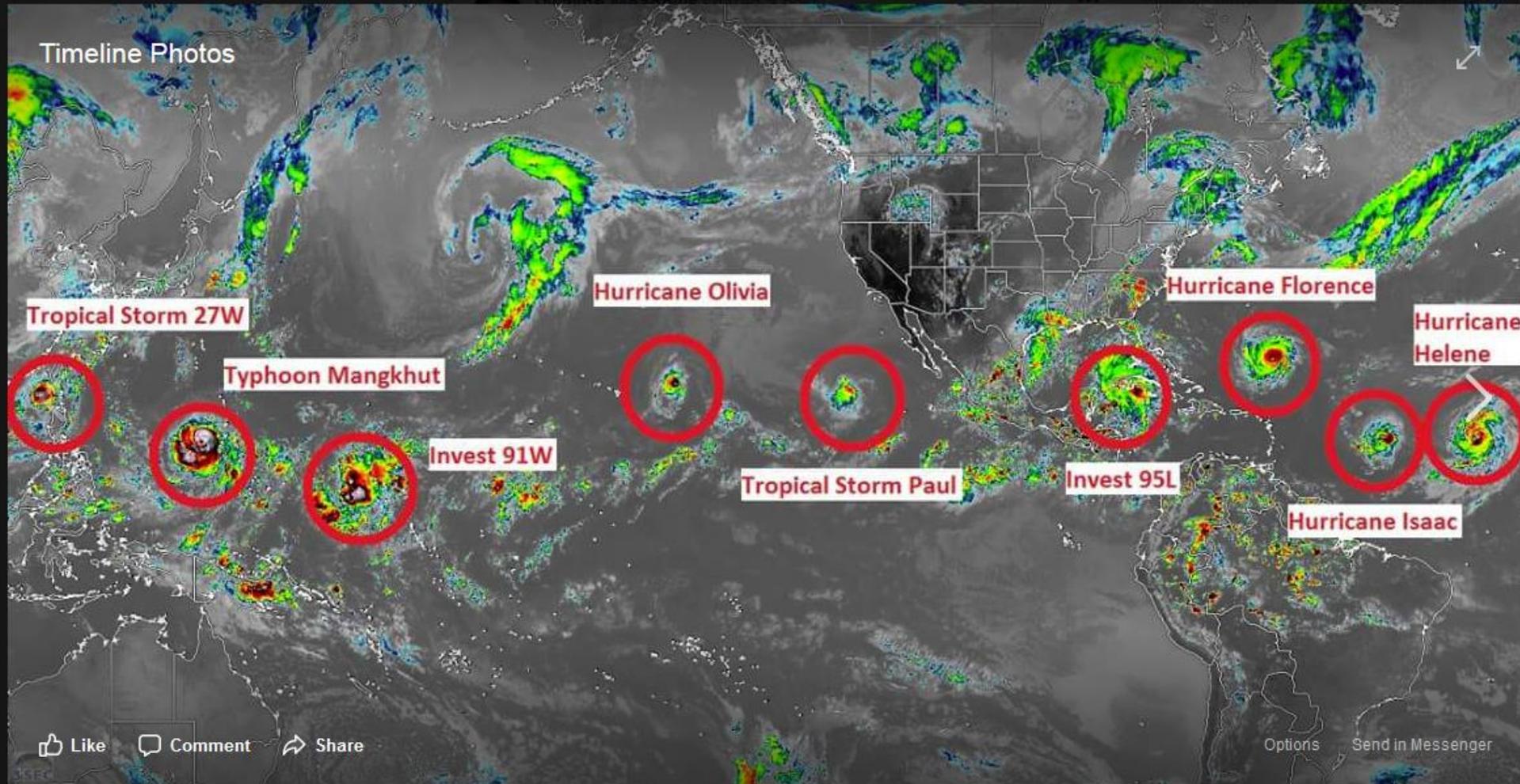
Thank You Sponsors!



Thanks You

- Student Assistant and GTU president - Crystal
- Student Volunteers - Alec, Alison Matt, Rachel and Dr. Johns' Students
- Staff – Bridget and Britani
- OPEN – Ben and Jenny

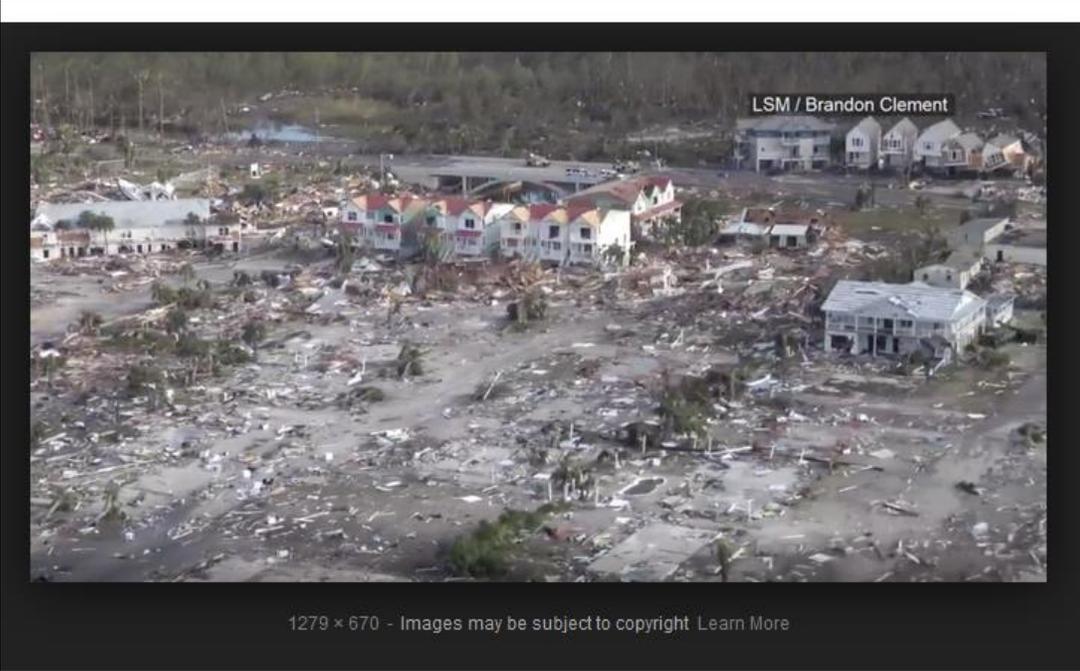
There are NINE tropical storms wrapping around the world (Sep 11, 2018)



Visualization by Owen Shieh, h/t Marshall Shepherd)

Florence and Michael

USA TODAY



(upper left) <https://radaronline.com/photos/hurricane-florence-photos/>



Flooding on Central Avenue, right by Hawkers Restaurant. Sunday, June 23rd, 2019, 5:30 pm. Lots of folks slogging through this, By Rebecca Johns



Flooding on 31st Terrace North in the Holiday Park Neighborhood of St. Petersburg during June, 2019, by Kara Doran



Winner of Best Photo Award: Kara Doran
AGU-iCAR 2019 Photo Contest

Flooding on 31st Terrace North in the Holiday Park Neighborhood of St. Petersburg during Hurricane Hermine,
September 3, 2016 around 10:30am.

Workshop Overall Goal

- **Pathways to Change: Policy and Action for Resilience (2019)**

Past workshops

- Coastal Adaptation and Resilience in Tampa Bay (2015)
- Solutions for Coastal Cities: Resilience and Adaptations in Tampa Bay (2016)
- Social Aspects of Resilience: identifying key areas of social vulnerability and enhancing resilience (2017)
- Lessons Learned from Hurricanes: Preparation, Recovery and Resilience (2018)

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Key Workshop Objectives

- The conference will build-on previously identified research, data, and policy gaps with a particular focus on how change happens
- Explore how science can be applied to create actionable policies (national, state and local levels)
- Explore how resiliency and adaptation policies are being translated into action here in the Tampa Bay region and around the country
- Explore how diverse communities build consensus and implement changes for resilience
- Explore how local and national officials are working toward a climate resilient economy
- Explore the implementation of resilience policies in marginalized communities here in Pinellas

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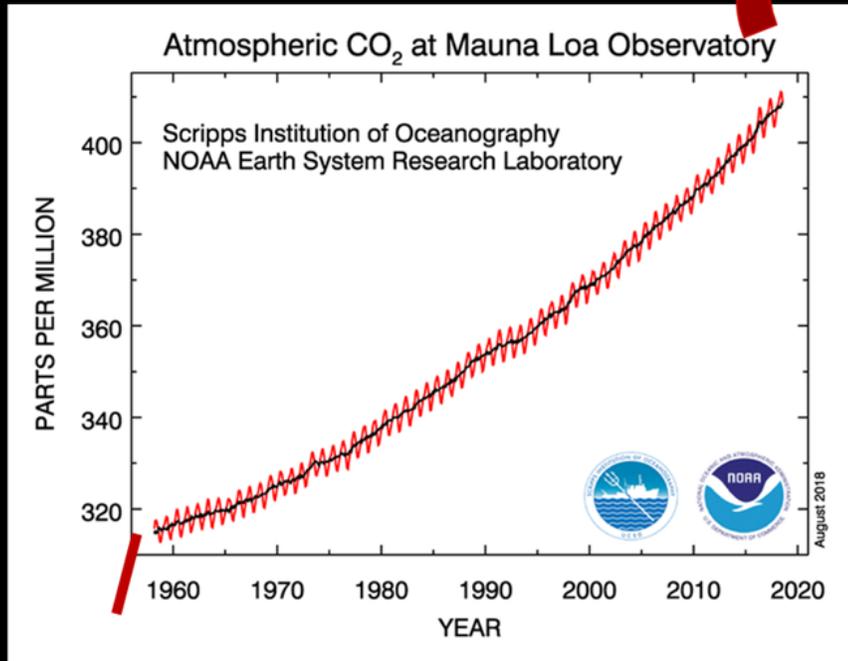
Key Workshop Topics

- Review of Ostrich Paradox – innate engineering
- Opportunities and barriers for translating science into policy and policy into action
- Urban development and Coastal High Hazard Zones
- Strategies for creation of a resilient economy
- Role of public participation and effective strategies for coastal resiliency through consensus building
- Building inclusive communities for climate resilience, equity and health
- Understanding how social and policy change happens
- Updates from the Tampa Bay Regional Planning Council
- Using crowd-sourced data for better decision-making for climate resilience

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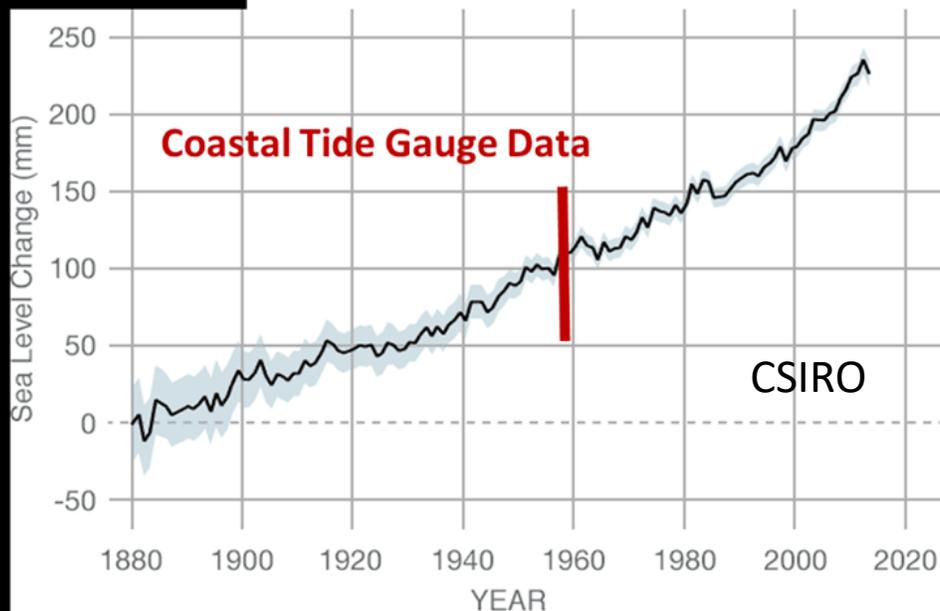
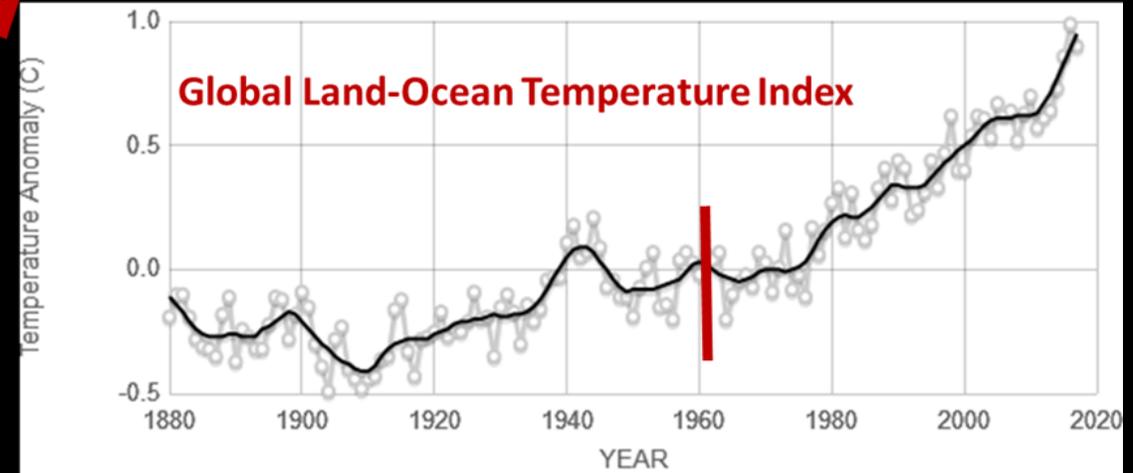
Measured Data



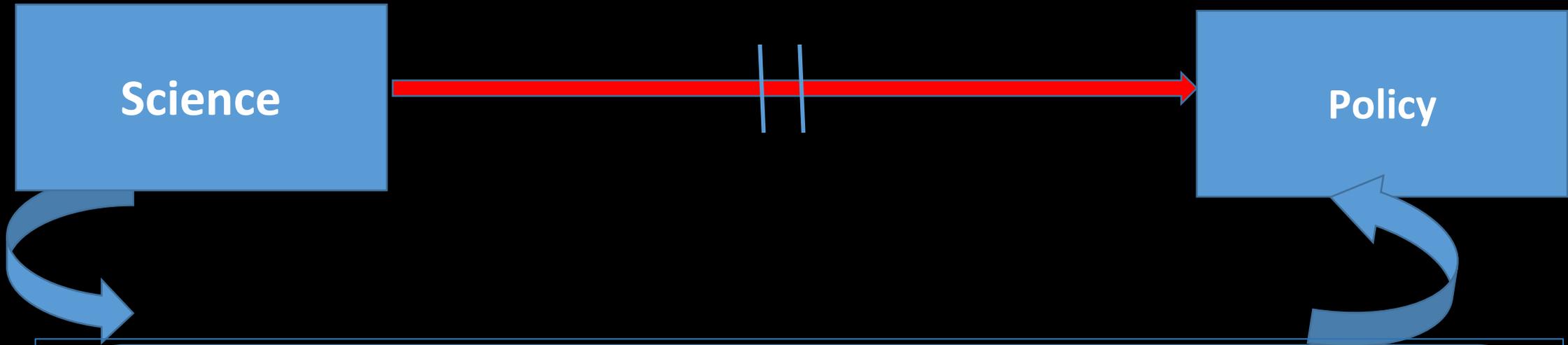
Left <https://www.esrl.noaa.gov/gmd/ccgg/trends/full.html>

Center : Credit CSIRO, Coastal Tide gauge data

Right: Data source: NASA's Goddard Institute for Space Studies (GISS). Credit: NASA/GISS



→ *Ideal Path for Policy Formulation and Decision Making*



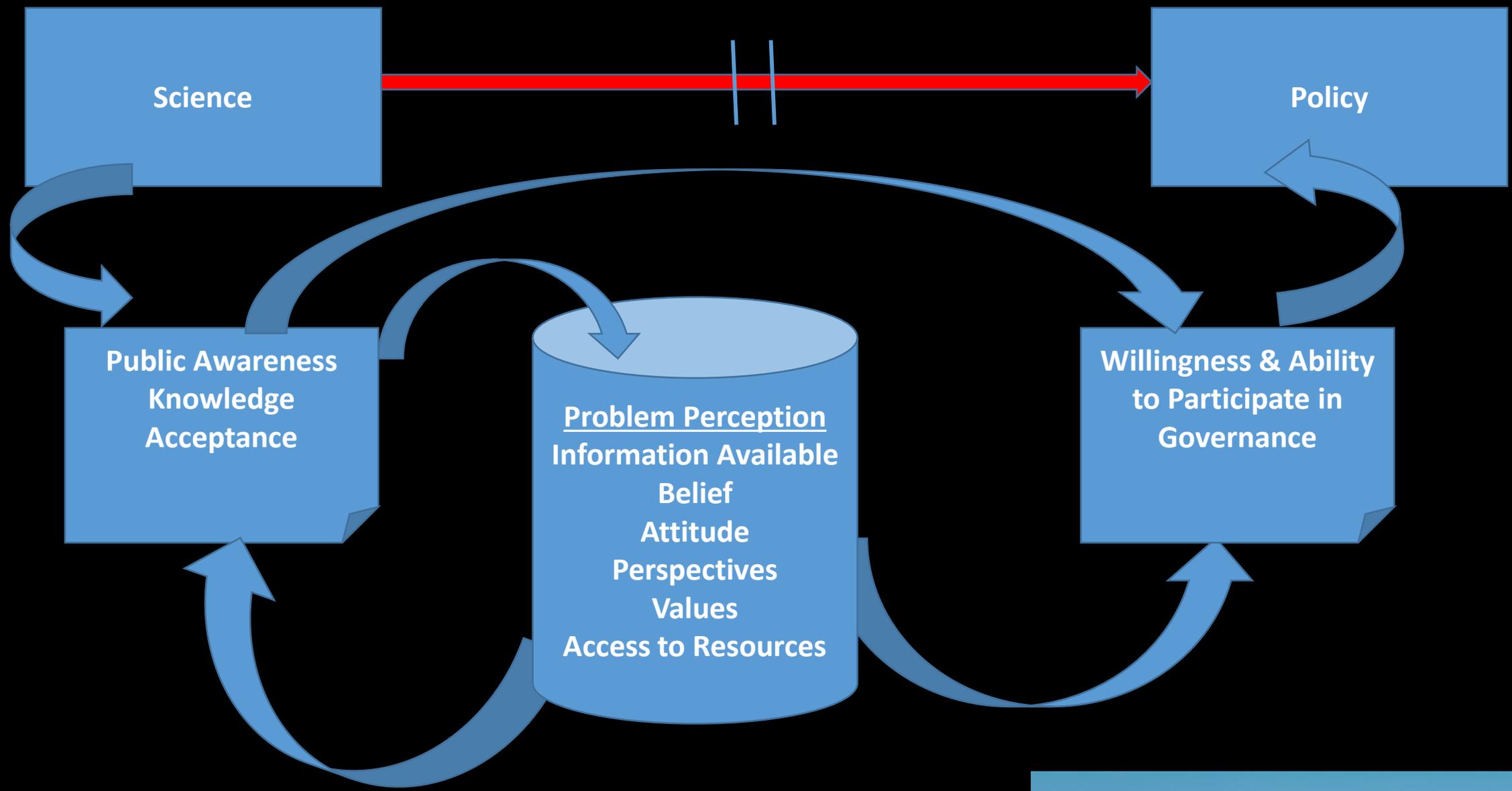
Economic & Technological Feasibility
Public Awareness and Knowledge
Decision Making Levels

(individual, Family, Community, Province/State, Country)

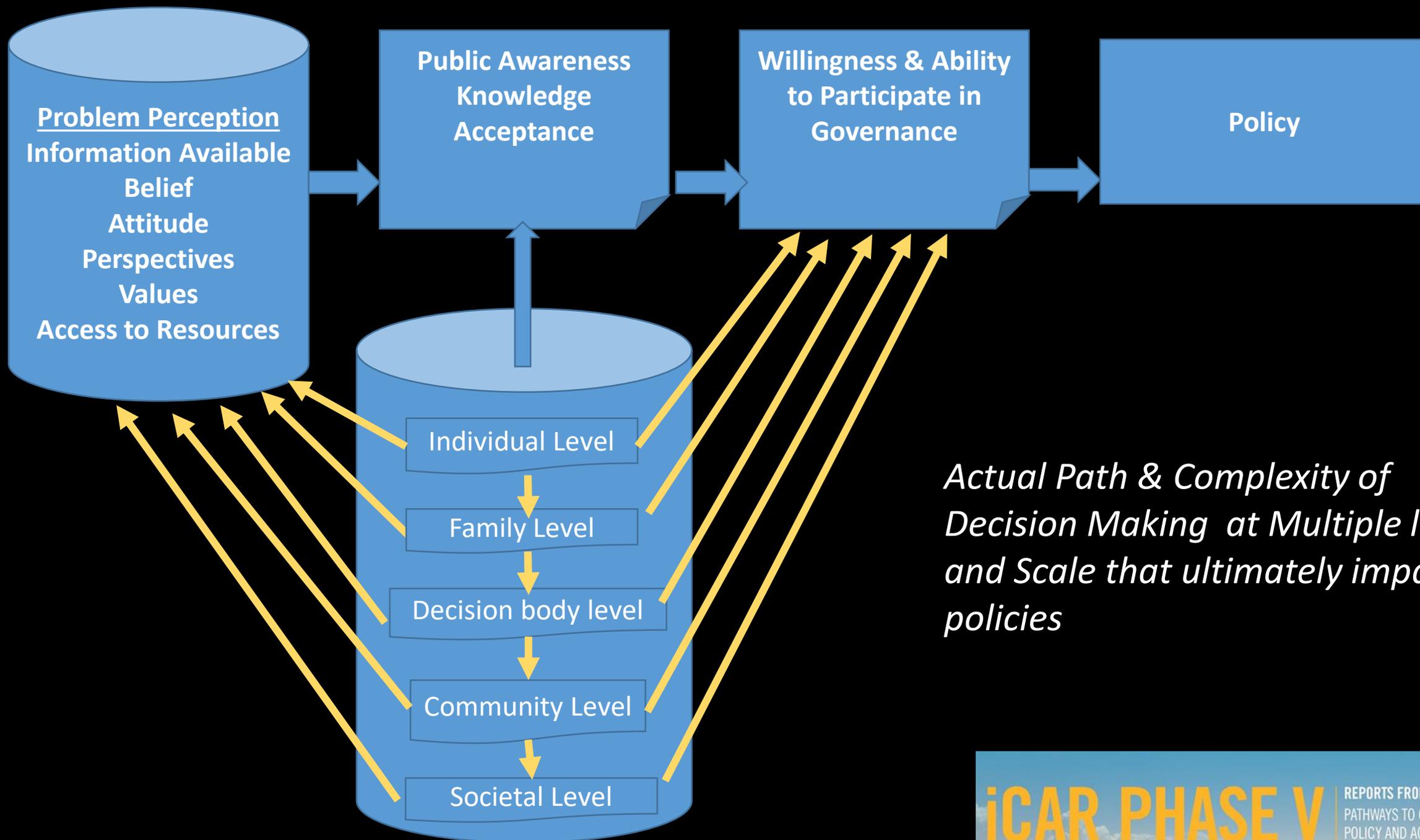
→ *Actual Path & Complexity of Decision Making and Policy Formulation*

Various iCAR activities attempts to facilitate this complex decision making process

→ Ideal Path for Policy Formulation and Decision Making

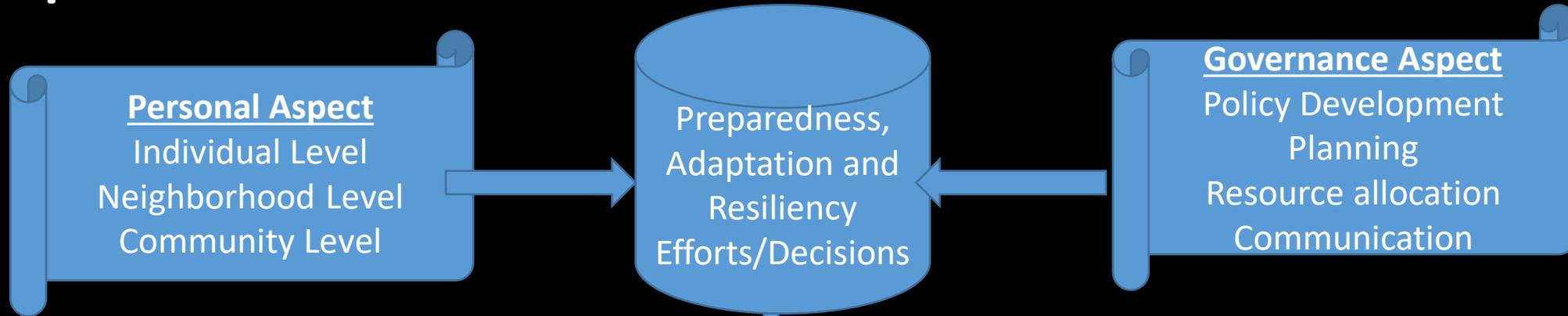


→ Actual Path & Complexity of Decision Making and Policy Formulation



Actual Path & Complexity of Decision Making at Multiple levels and Scale that ultimately impact policies

Generic Process to Increase Preparedness, Adaptation and Resilience



Level of information need varies depending on which level a decision is being made

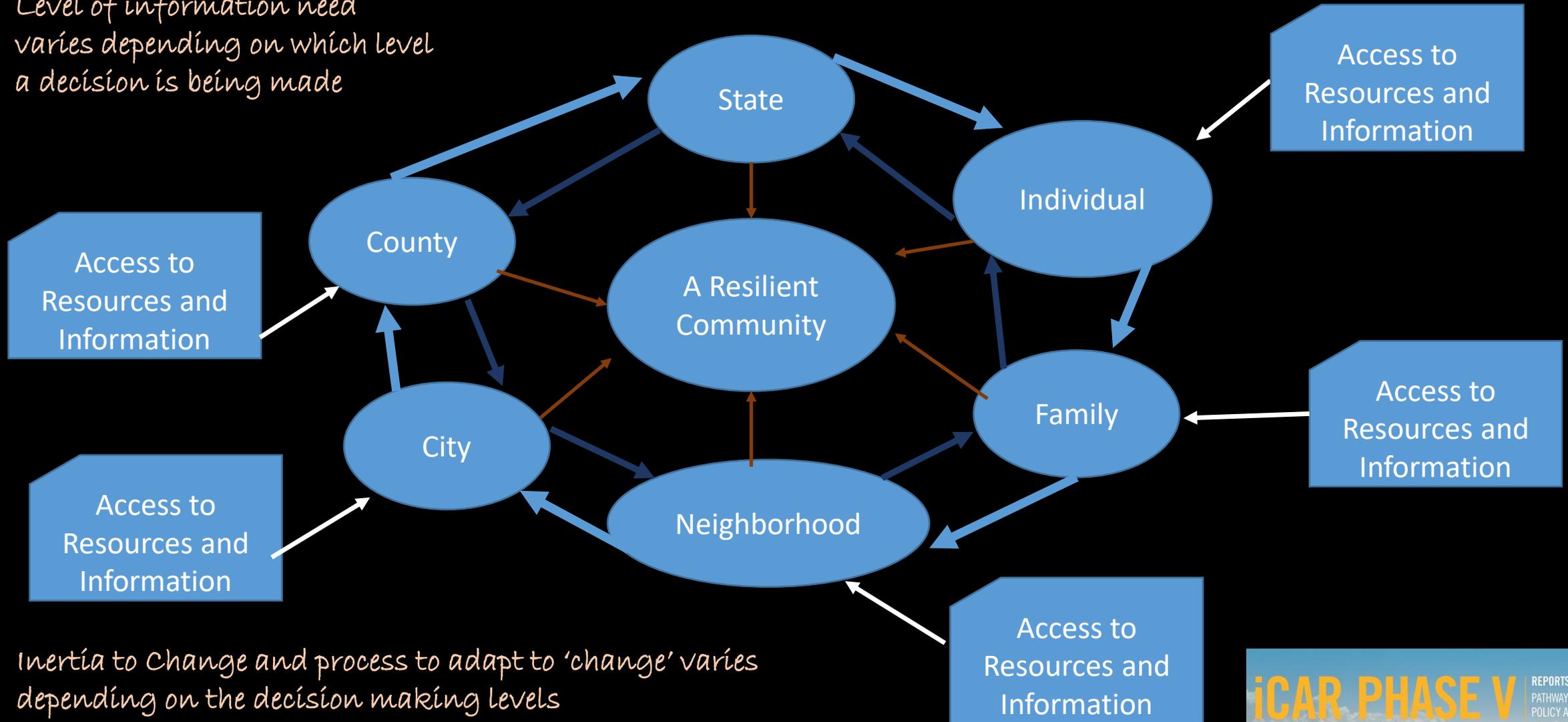
- ✓ Individual,
- ✓ family,
- ✓ neighborhood,
- ✓ City,
- ✓ County & state

Access to Information
Access to resources
Social Capital and Social Network
Post Disaster Comprehensive Recovery Plan



Complexity Toward Resiliency?

Level of information need varies depending on which level a decision is being made



Inertia to Change and process to adapt to 'change' varies depending on the decision making levels

Access to Resources & Information Scenarios



Sources: [http://www.airportairparkhomes.com/homedetail.asp?id=504\(right\)](http://www.airportairparkhomes.com/homedetail.asp?id=504(right))
https://www.zillow.com/naples-fl/florida-private-fly-in-gated-community_att/ (lower middle)

Source: https://www.realtor.com/realestateandhomes-detail/3465-15th-Ave-S_Saint-Petersburg_FL_33711_M60804-58355#photo5 (right)

Bing images (left)

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One size fits all to Customized Information

- One size fits all Policy Making vs Scenario-based
- Information/messaging
- Resource allocations
- Policy development and implementation

Assemble Disaster Supplies

Get your supplies before hurricane season begins. Have enough food and water for each person for at least three days. Be sure to fill your prescriptions and have medicine on hand. Radios, batteries and phonechargers on are also must haves. Gas up your vehicle and extra cash on hand.



ASSEMBLE DISASTER SUPPLIES.



Your First Aid Kits are no longer compliant! See [New Compliant Kits](#) or read about [NEW OSHA & ANSI](#) guidelines

Home » Disaster & Survival

Disaster & Survival

FREE STUFF! **PREPARE TO PREPARE** **CLICK HERE** **SEPTEMBER IS PREP MONTH** **2017** **Disasters Don't Plan Ahead. YOU CAN.** **NATIONAL PREPAREDNESS MONTH**

Survival Gear: Disaster Preparedness, Emergency Supplies, Camping & Wilderness Equipment – Everything to complete your checklist: **Are you Ready? Make a Plan-Build a Kit-Be Informed-Get Involved.** 72 Hour Emergency Preparation Supplies for Earthquake, Hurricane, Tornado, Twister, or Nuclear Event Readiness. Disaster Management, Wilderness Survival & More... C.E.R.T. & F.E.M.A. recommended supplier. See all the Emergency Essentials you need for Disaster, Evacuation, Survival, Winter Storm, & Earthquake. Read our Survival Tips below: learn how to prepare and survive... Whether you are prepping your car for a roadside emergency, stocking your home to shelter in place, equipping your school or business for emergency - or even if you are a prepper gearing up for TEOTWAWKI, Armageddon, or other apocalyptic holocausts - we've got everything on your emergency preparedness checklist for when the SHTF! (Also see the [BEST First Aid Kits](#) & Don't forget [COLD PACKS](#) - great for cooling foods, treating heat injuries and more - essential disaster supplies!)

SEE OUR SURVIVAL GEAR & EMERGENCY PREPAREDNESS PRODUCTS + SURVIVAL TIPS!

<p>Emergency Survival Kits</p> <p>72 Hours & Longer Emergency Disaster Preparedness Kits</p> <p>More Details</p>	<p>Auto Survival & Roadside</p> <p>Auto and Vehicle Roadside Survival Kits – Bug Outs, Auto Emergency Tools & AAA Emergency Survival Kits</p> <p>More Details</p>	<p>Survival Tips</p> <p>Tip #1: Prepare your car before you prepare your home. Learn Why...</p> <p>Tip #2: Eat food in your freezer after the food in your refrigerator. Learn Why...</p> <p>Tip #3: Do not flush your toilets (Yet). Learn Why...</p> <p>Tip #4: Change your flashlight and emergency radio batteries every time you adjust your clocks (daylight savings and standard time). Learn Why...</p> <p>What is the difference between Disaster Survival and Wilderness Survival?</p> <p>Many lessons learned from camping, hiking and backcountry adventures (and misadventures) over the years have inspired the Disaster Survival and Preparedness mindset and product lines of today. "Roughing it" is the essence of riding out the period after a calamity occurs. Often, even if sheltering in place at home, work, or school, we no longer have the conveniences we are accustomed to – no running water, heat, electricity, medical, or sanitary facilities. This is even more the case when caught on the road. As such, you will find many "Camping" type items in a typical survival turn out or go bag. Just as when planning for an overnighter on the trail, well-equipped survivalists gear up for food, water, warmth, shelter, communication, lighting... and entertainment (yes, it gets spooky and boring sitting in a dark house all alone with no distractions or outside input – don't forget a deck of playing cards and a solar/dynamo/crank radio or LOTS of batteries for those flashlights).</p>
<p>Emergency Survival Food</p>	<p>Emergency Survival Water</p>	

Introduction - Micro...

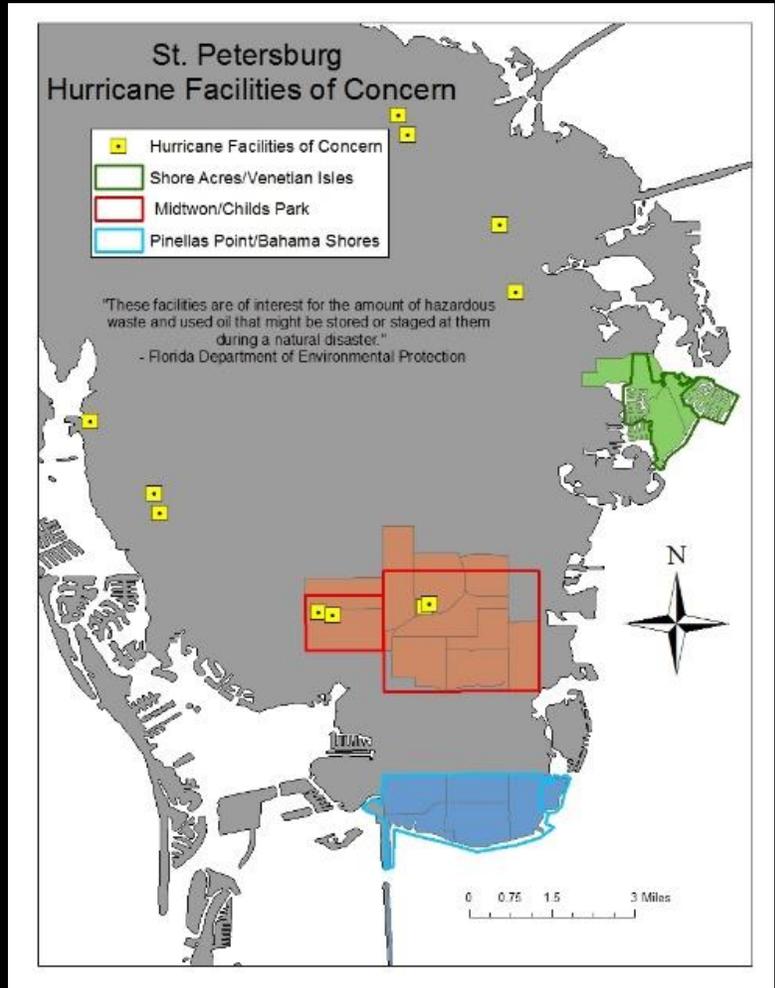
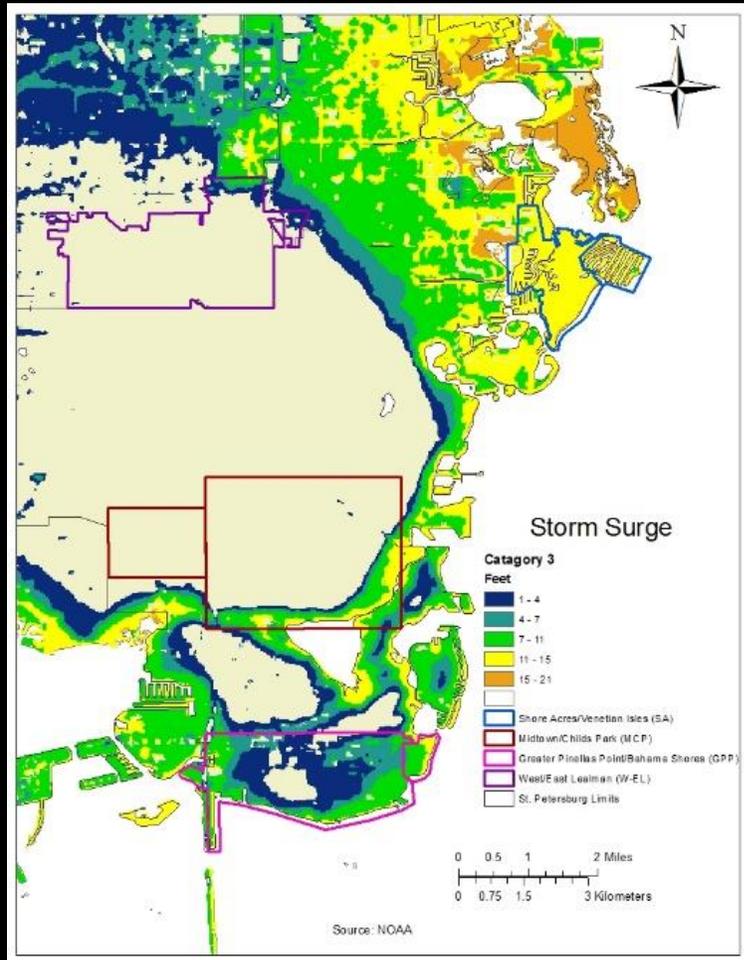
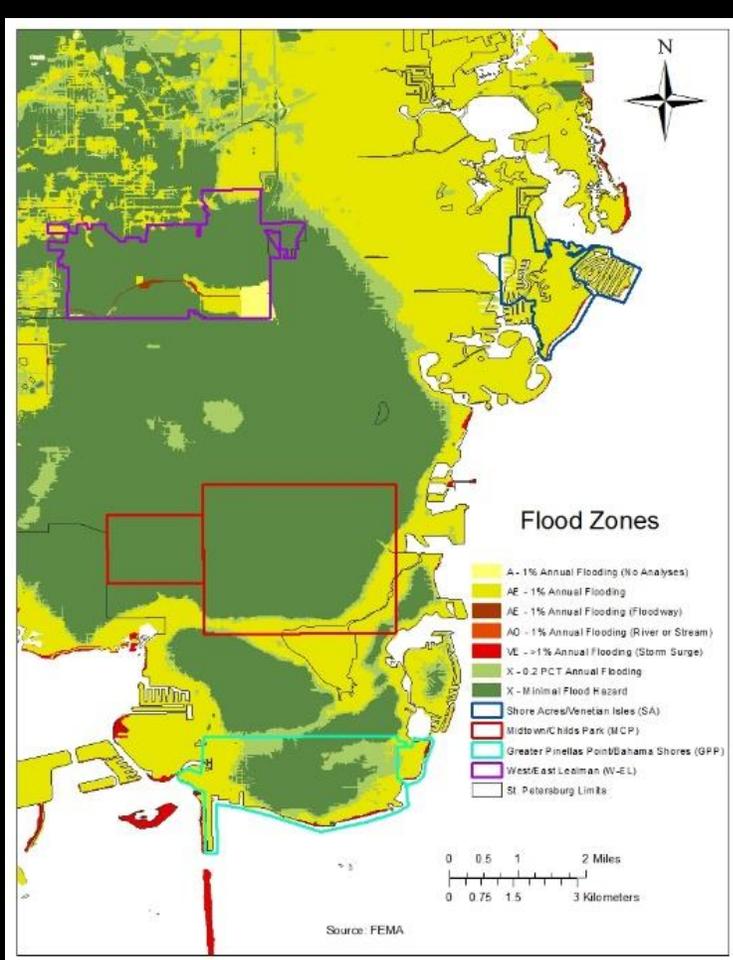


School's Out, Hunger's Not
Summer Food Drive

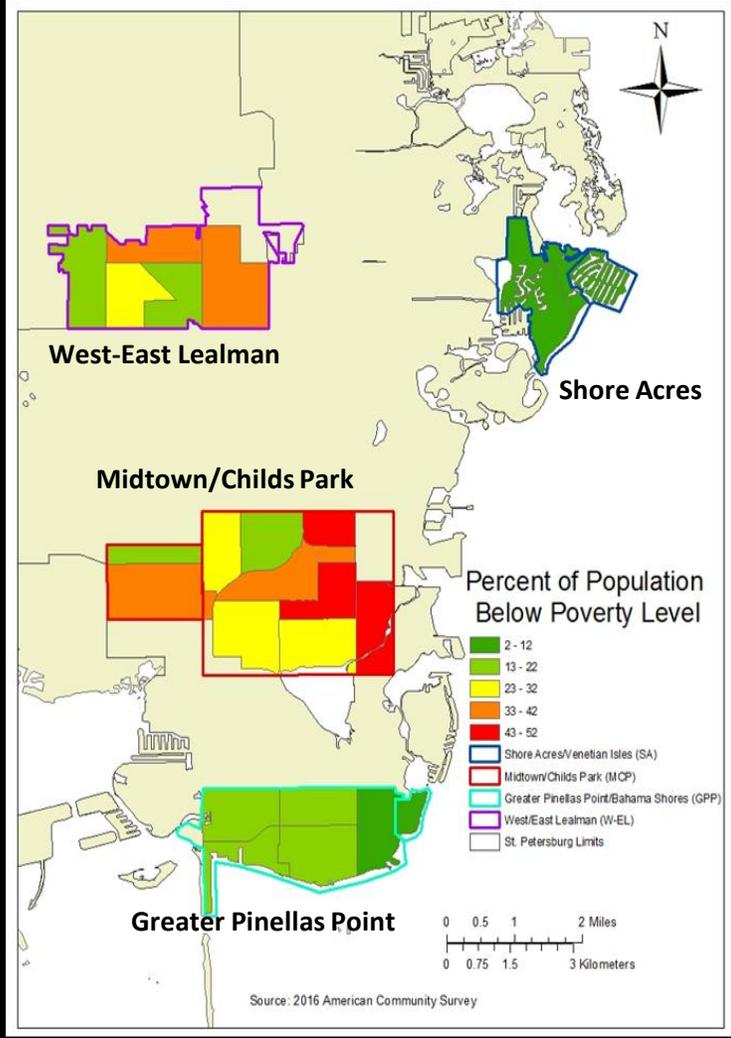
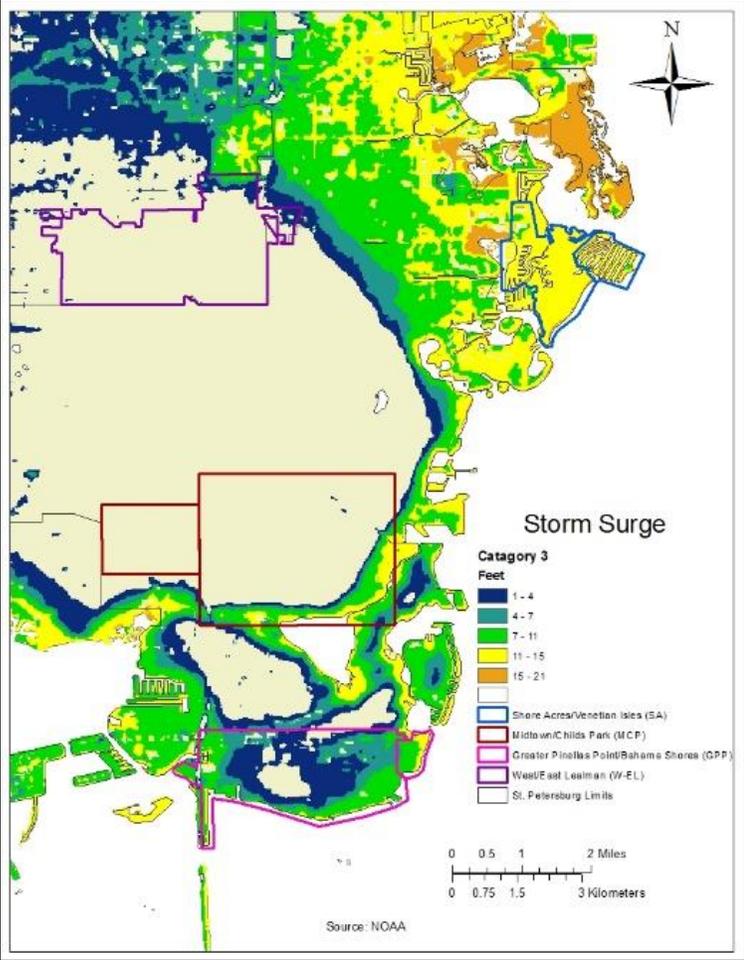
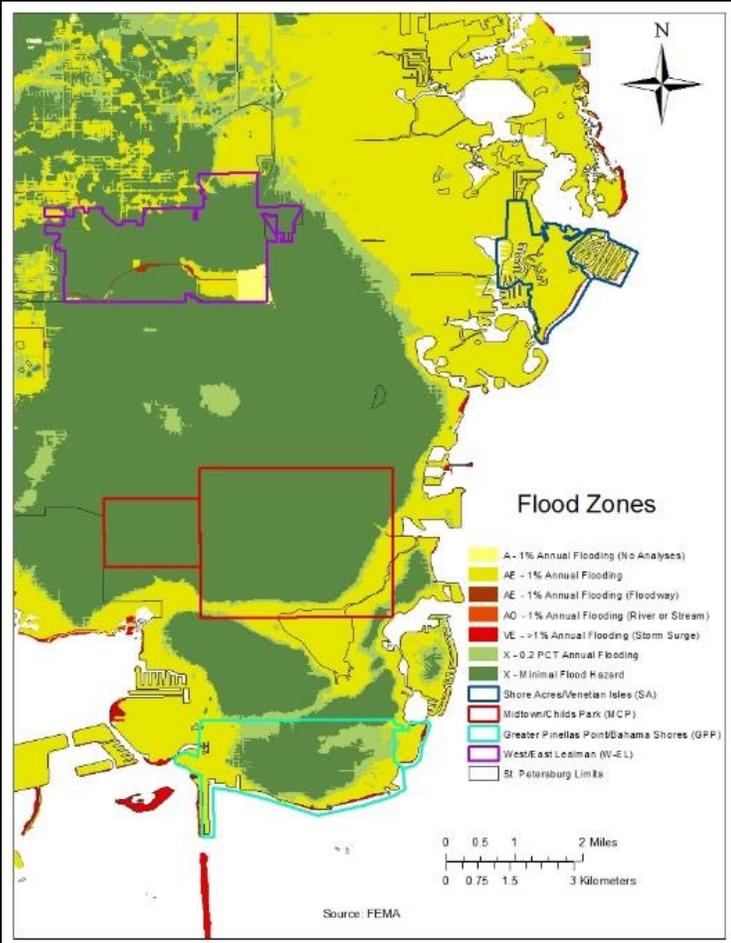
If you need help feeding your kids when the school is out – you don't have resources to prepare for a disaster

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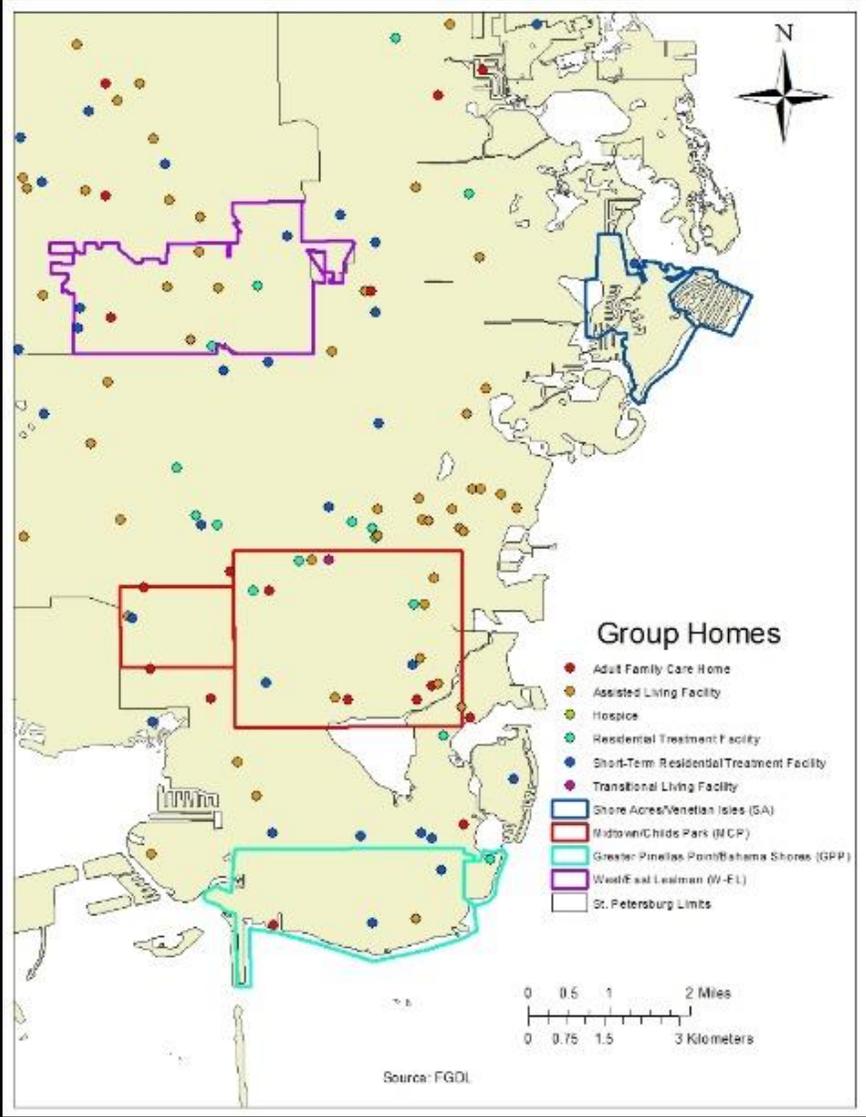
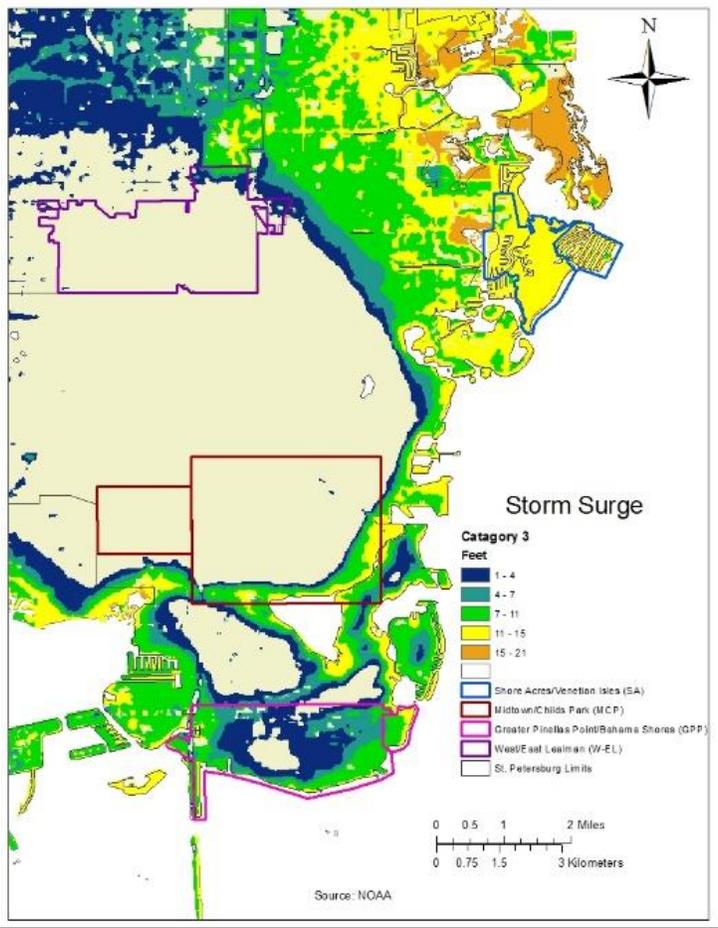
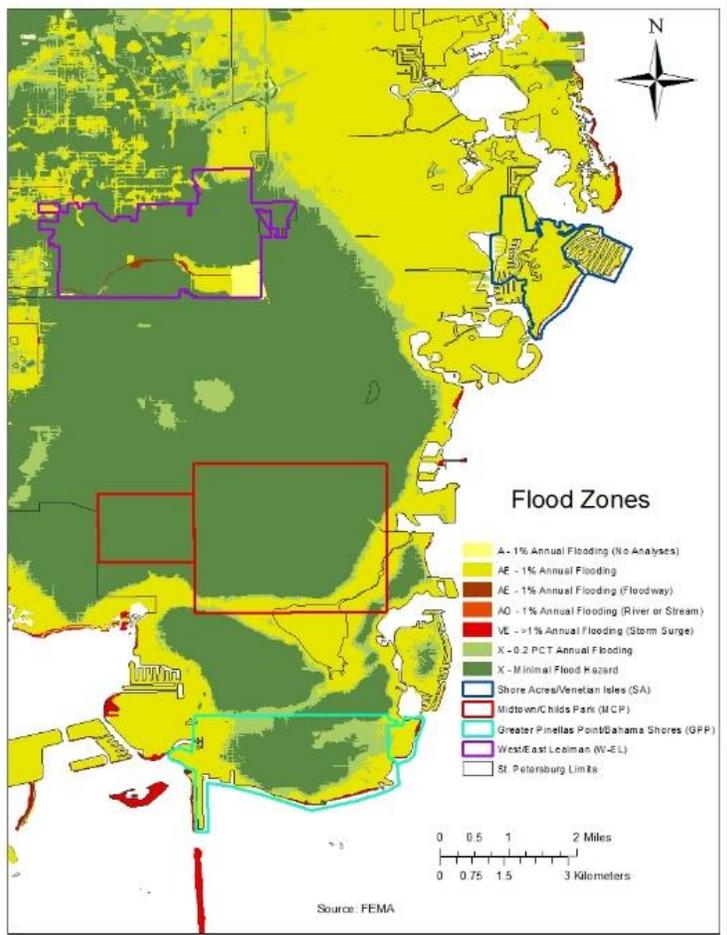
Different Scenario – needs different decisions



Different Scenario – needs different decisions



Different Scenario – needs different decisions



Different Scenarios – needs different actions & plans, difference resources

Hurricane Irma: Hundreds of thousands experien.

IRMA'S AFTERMATH

POWER OUTAGES

County	Percentage
CITRUS	19%
HERNANDO	7%
PASCO	14%
HILLSBOROUGH	14%
POLK	16%
PIRELLAS	21%
MANATEE	18%
HARDEE	25%
HIGHLAND	8%
SARASOTA	25%
DESOTO	32%

IRMA'S AFTERMATH **WAITING FOR POWER**

0:02 / 2:01

YouTube



<https://www.bing.com/videos/search?q=power+outage+Irma+&&view=detail&mid=4618919069B7B923665F4618919069B7B923665F&&FORM=VRDGAR>

(upper left) <https://radaronline.com/photos/hurricane-florence-photos/>

Food for Thought!

- How we can fundamentally shift the Decision Making Process
 - **Innate Engineering** (Myer and Kunreuther , 2017)
 - Myopia, Amnesia, Optimism, Inertia, Simplification and Herding (following others)
- How we can ensure informed decision making and participation in governance
- How we can ensure equitable access to resources and information
- Customized information and access to resources based on needs and scenarios?

All these require a proactive plan and forethoughts so we can respond and recover in minimum time possible.

We must do all we can to avoid the mistakes of Katrina in this region

Thank you!

Looking forward to a productive workshop