

Using Natural Solutions to Build A Resilient Georgia Coast: A Camden County Pilot Project

June 19, 2018

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Georgia's vulnerable coast

Climate change is increasing our coastal hazards such as...

- Nuisance tidal 'sunny day' flooding, Nor'easters
- Hurricane storm surge
- Encroaching sea level rise
- Erosional banks
- Change in precipitation causing drought and flood, periodic riverine flooding



At the same time, population is increasing in the region...

- Between 1980 and 2006 the coastal counties along the Southeast Atlantic had the largest rate of population increase (79%) of any coastal region in the conterminous United States (Dahl, 2011).
- Anywhere from 60k to 160k coastal Georgians will be affected by sea level rise by 2100 (1m or 2m prediction) with a great majority in Glynn and Chatham Co. (urban areas) (Hauer et al, 2015)



Increased population + increased coastal hazards due to climate change
= increased vulnerability to both human and natural systems

Nature Based Solutions

for reducing flood related risk across social, economic and ecological systems

Preserving natural infrastructure can be a cost effective way to reduce the impact of coastal hazards on communities by reducing wave action and erosion, and absorbing floodwaters.

- Barrier islands
- Beaches & dune systems
- Marshes & wetlands
- Oyster reefs
- Floodplains
- Natural open space and aquifer recharge areas
- Green infrastructure (incorporating nature in traditional grey infrastructure)

Coastal wetlands prevented US\$625 million in flood damages to private property during Hurricane Sandy (Beck et al 2016)

Oyster reefs save communities \$85,000 per year per hectare when used in place of artificial breakwaters. (TNC)

Approximately 67% of the U.S. coastline is protected by natural habitat — which, if lost, would double the number of poor families, elderly people and total property value in the areas at highest risk from coastal hazards such as storm surges (Arkema et al, 2013)



The best solutions may depend less on modern infrastructure and more on rethinking how we value existing natural resources, and preserving them for the future

TNC's coastal resilience work across a network of pilot Southeast community projects



Currituck County, NC



North Coast SC



Camden County, GA



Southeast FL

Building with partnerships and from foundational plans



Camden County, Georgia



City of St. Marys, Georgia



University of Georgia Marine Extension & Georgia Sea Grant



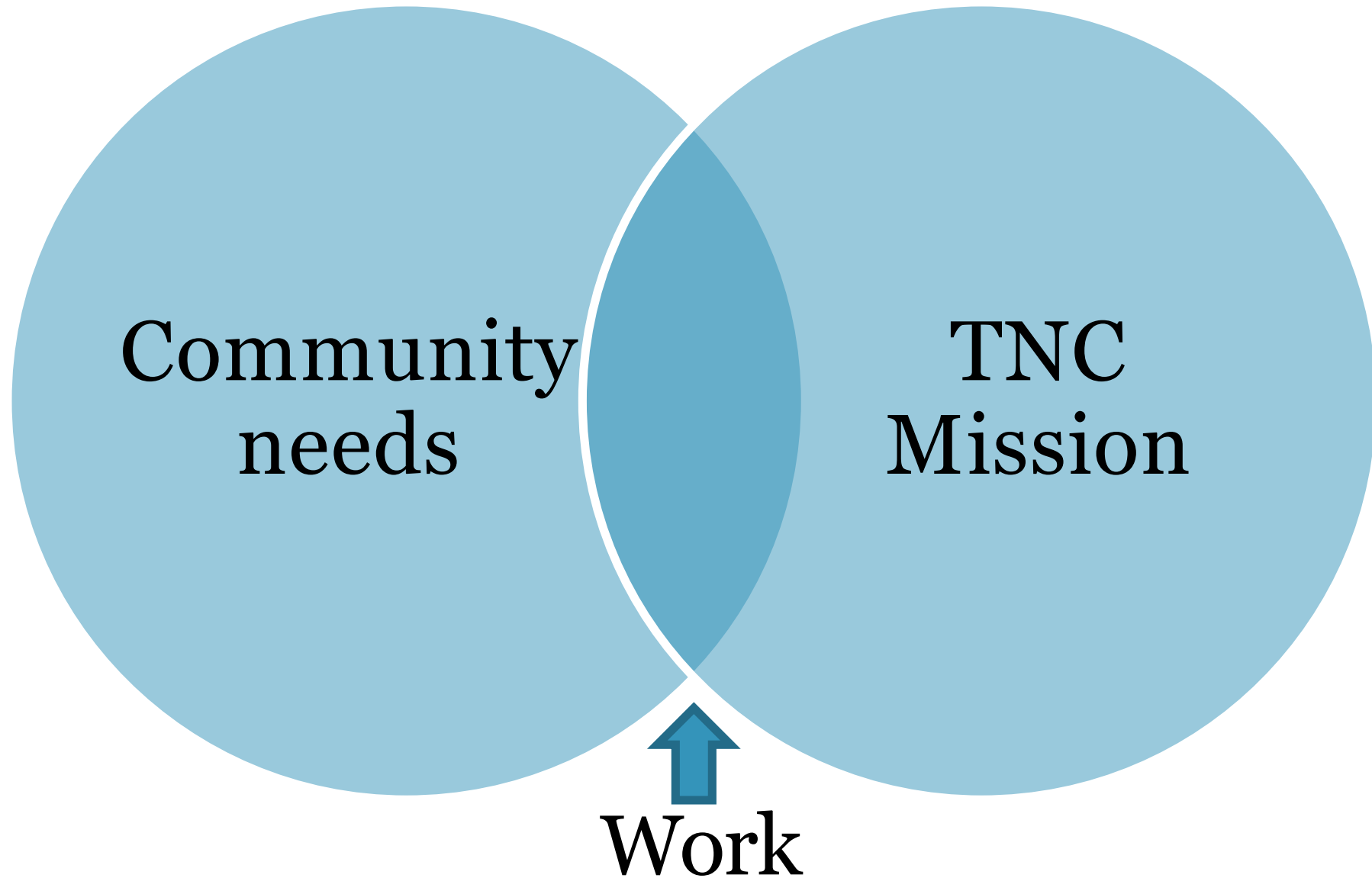
Georgia Department of Natural Resources – Coastal Resources Division



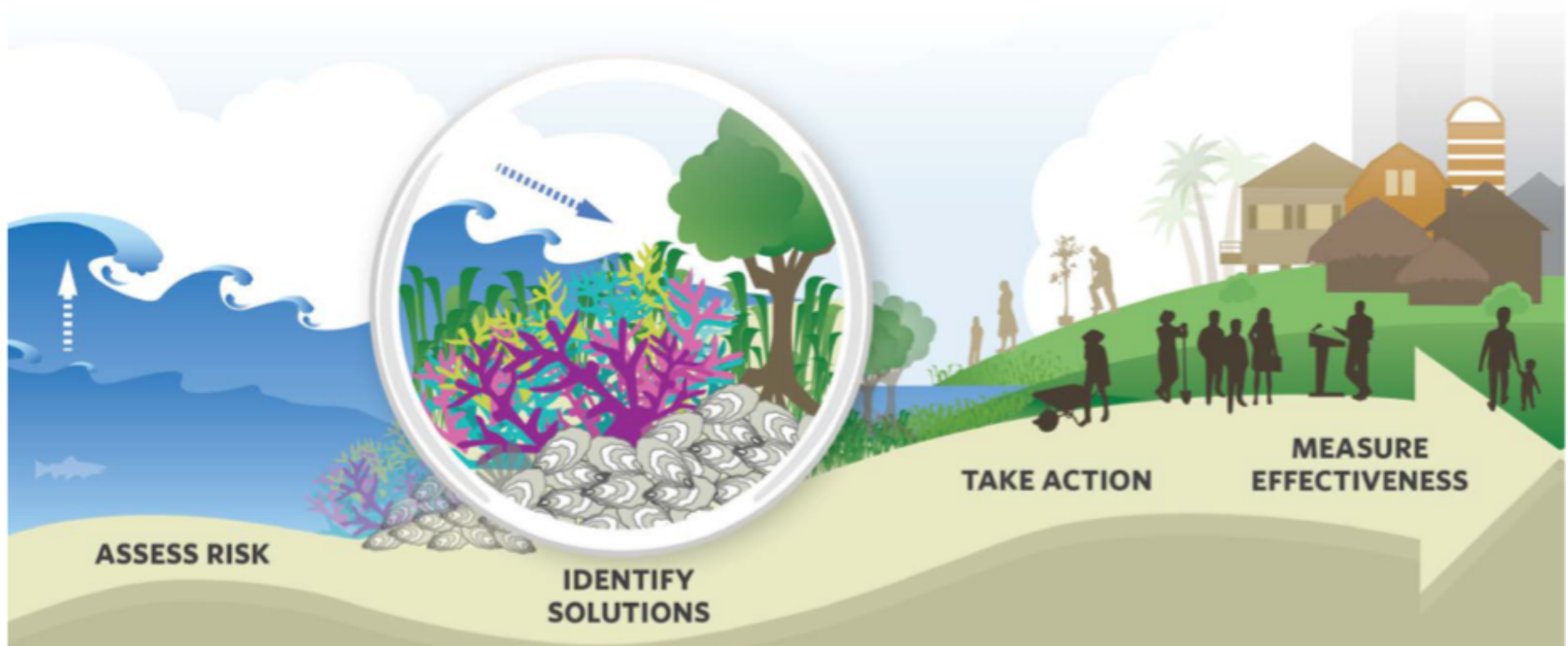
The Nature Conservancy



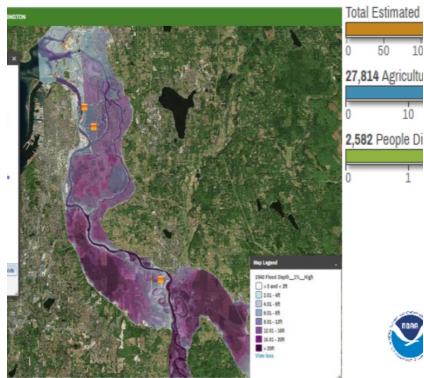
Coastal Regional Commission of Georgia



Our Coastal Resilience Approach



Targeted trainings, workshop and meetings



Series of 3 webinar trainings on ...

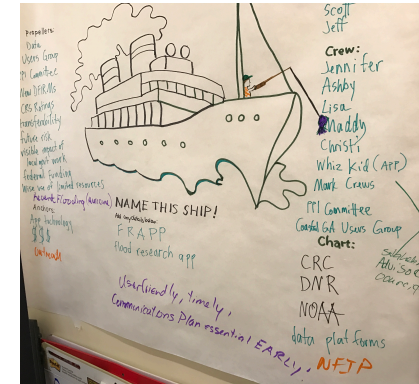
- Visualizing & Identifying risks
- Addressing Flood Risks with Nature
- Prioritizing Natural Solutions to build resilience



Networking workshop exploring community risks, needs and potential natural solutions



Leadership 'parade'



Project workplan 'boat' with propellers and anchors



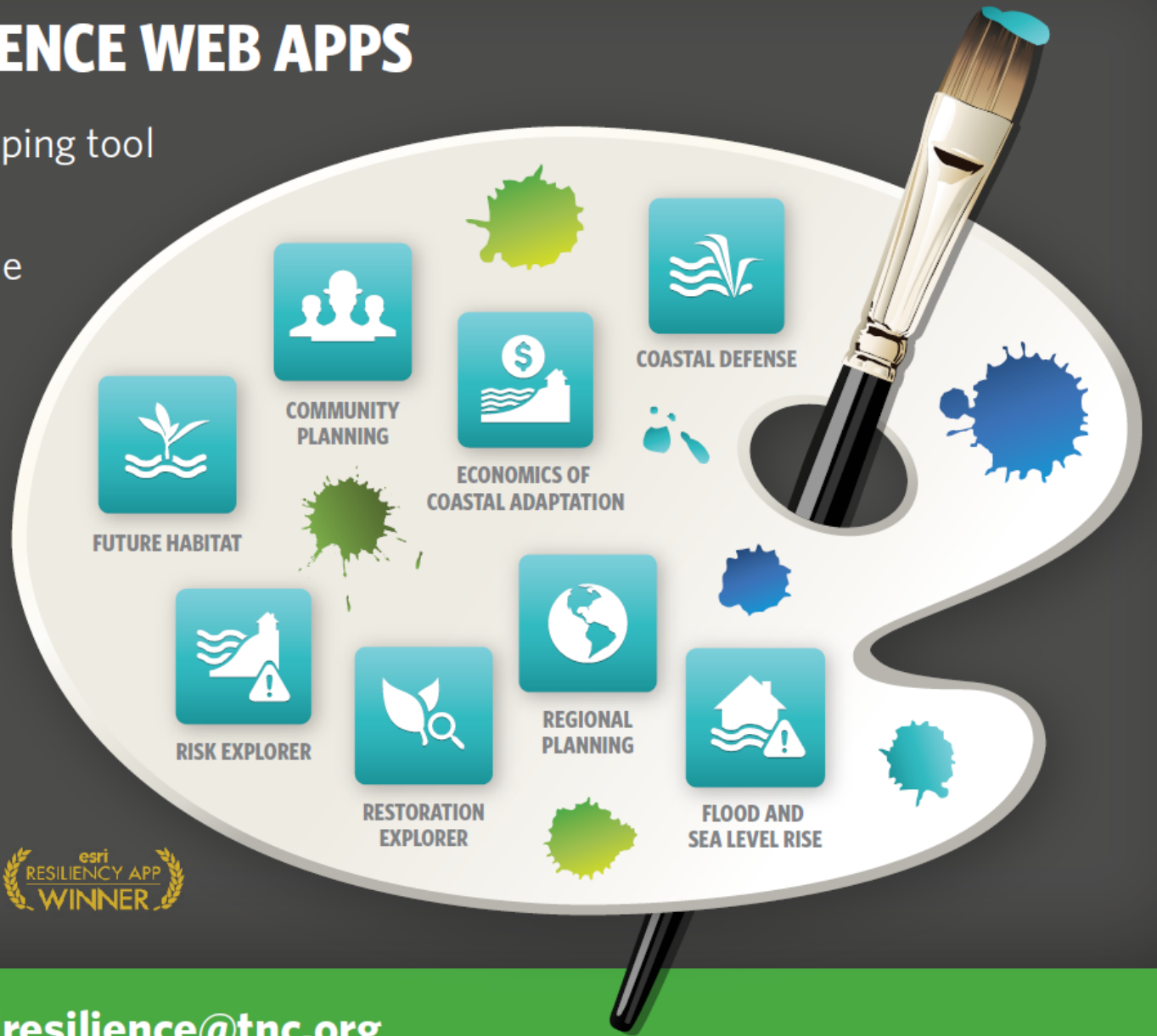
Ongoing In-person meetings to implement plan, apply for funding and implement pilot project

Incorporating Natural Solutions into Local Coastal Resilience Planning

Online Decision Support Mapping Tools

COASTAL RESILIENCE WEB APPS

An innovative web-mapping tool designed to engage key stakeholders and provide decision support in identifying nature-based adaptation and risk mitigation solutions.



Special Achievement in GIS
2015 Award Winner



Contact us at coastalresilience@tnc.org

Discover the tool at maps.coastalresilience.org | Follow us @CoastResilience

Thank you! Questions?

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