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## **BACKGROUND**

In October 2018, county and local government elected officials from throughout the Tampa Bay Region voted to sign a memorandum of agreement creating the Tampa Bay Regional Resiliency Coalition. The MOU calls for the creation of a Regional Action Plan with strategies for coordinated regional preparation for and adaptation to a rapidly changing global environment. The MOU also calls for the plan to identify funding strategies at the local, state and federal levels for mitigation and adaptation actions to deal with those impacts.

## **CONTEXT FOR READING THE OBJECTIVES AND ACTIONS**

The Regional Resiliency Action Plan is intended to serve as a guiding framework and provided a menu of best practices, which will be implemented locally and together as a region. TBRPC staff reviewed resiliency plans, recommendations and frameworks used around the country and state to identify promising practices that would work in our region. The TBRPC staff also received recommendations on best practices being implemented in region – so the plan builds on the priorities and work of member governments. The plan defines regional collaboration and actions that will enhance consistency in implementation across jurisdictions.

*The actions reflect a compilation of best practices, are voluntary and should be viewed by local governments as recommendations.*

Recognizing that Coalition members have different levels of resources and are at different stages in resilience planning, the plan is designed to support local governments from small to large. It includes a range of actions which will enable local governments to implement “low hanging fruit” and new innovative approaches.

## **LOCAL GOVERNMENT AND STAKEHOLDER INPUT ON THE DRAFT PLAN**

Stakeholder feedback is essential to ensure the proposed actions match local and regional priorities. The ownership of the plan belongs to the member governments of the Resiliency Coalition. As such the top priority is ensuring that the plan aligns with the priorities of member governments and is supported by the Coalition Partners.

The TBRPC asks that member government staff conduct meetings for interdepartmental teams for review, forward to staff who have not been able to participate in the workshops and share the plan with relevant advisory boards.

Coalition Partners, community stakeholders, and subject matter experts are invited to provide comments. Your input will help to ensure the plan aligns with leading practices, is consistent with leading academic research, federal and state agency goals, and supports the priorities of organizations serving the communities in the region.



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## HOW TO PROVIDE FEEDBACK

Click on the links to download the [Regional Resiliency Action Plan Draft](#) in Word or PDF format. Please use the [comment](#) feature in Word or [add comments](#) in Adobe PDF.

When reviewing the goals, objectives and actions, **please include the number**. Feel free to provide specific copy edits to help enhance public understanding. You can also indicate actions that should be consolidated or removed. Or you may also propose new actions.

If necessary, the TBRPC will also hold a meeting with Coalition Members and Partners to review and discuss key topics. We also ask that you provide written comments to support the editing process.

## DEADLINE FOR INPUT

Please submit your comments and feedback to [cara@tbrpc.org](mailto:cara@tbrpc.org) by **May 28, 2021**. The TBRPC will combine comments in June and post the updated draft in July.

## HAVE QUESTIONS?

Contact Cara Woods Serra ([cara@tbrpc.org](mailto:cara@tbrpc.org)) or CJ Reynolds ([cjreynolds@tbrpc.org](mailto:cjreynolds@tbrpc.org)).

# CHAPTER 1

## **RISKS AND FUTURE CONDITIONS**

*Sound science and regionally  
consistent data use.*

# Goal 1

## Community Resiliency is at the top of the Public Agenda and sustained with science and data.

The impacts of climate change are already being felt in communities across the country. More frequent and intense extreme weather and climate-related events, as well as changes in average climate conditions, are expected to continue to damage infrastructure, ecosystems, and social systems that provide essential benefits to communities.<sup>1</sup> Extended droughts and heat waves have created food and water shortages. These types of threats are expected to become more common and more severe as the climate continues to change.<sup>2</sup>

All individuals, businesses, and governments in the Tampa Bay region have and will continue to be affected by climate change. To adequately prepare our community for climate impacts, it is important to understand the current and projected local effects of climate stressors in Tampa Bay that include sea-level rise, droughts, extended heat waves, and more frequent storms.

Based on feedback from Coalition members and partners, it is important that any data that is being collected or monitored by regional partners adhere to FAIR principles for data management, meaning the recommended data sources are findable, accessible, interoperable, and reusable.<sup>3</sup> Many of these principles can be achieved by deploying a regional data portal to make the data being tracked easy to find and accessible. It is also important to provide some guidance to local governments on how to use the data such as which projects are a good fit for certain data sets, and how to use data projections with multiple time horizons.

## Terminology

For consistency and clarity, it is important to define some terminology in this chapter. This document will refer to hazards and planning for hazards throughout. A **Hazard** is an event or condition that may cause injury, illness, or death to people

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<sup>1</sup> <https://nca2018.globalchange.gov/>

<sup>2</sup> Intergovernmental Panel on Climate Change. "Global warming of 1.5°C. An IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty." IPCC. <http://www.ipcc.ch/report/sr15/>. (Accessed Oct. 2018).

<sup>3</sup> <https://www.go-fair.org/fair-principles/>

or damage to assets. Extended periods of excessive heat are likely to be an increasingly common hazard in the coming decades.

It is important in the face of these hazards, that communities consider the best way to protect community assets. **Assets** are people, resources, ecosystems, infrastructure, and the services they provide. Assets are the tangible and intangible things people or communities value. The infrastructure of roads, airports, and seaports are assets. The service of supply chain stability (supported by transportation infrastructure) is an asset. A community's local "charm" is an example of an intangible asset.

Community assets are likely to see impacts from climate and non-climate hazards in the future. **Impacts** are the effects on natural and human systems that result from hazards. Evaluating potential impacts is a critical step in assessing vulnerability. In the West, the destruction of homes by wildfires is among the impacts of hotter and drier conditions and earlier snowmelt.

Hazards, and by extension hazard impacts, can be worsened by climate stressors. **Climate stressors** are a condition, event, or trend related to climate variability and change that can exacerbate hazards. Increasing frequency and intensity of drought conditions can be a climate stressor for forests and crops. Rising sea level is another climate stressor.

It is important to acknowledge that non only climate stressors can worsen hazards. **Non-climate Stressors** are a change or trend unrelated to climate that can exacerbate hazards. Altering drainage patterns and replacing open land with roads and buildings are non-climate stressors for flooding hazards. Population growth along exposed coasts is another non-climate stressor.<sup>4</sup>

For the purposes of this document and ongoing data management, indicators will be categorized as climate, driver or impact indicators. **Climate Indicators** are a set of parameters that describe the changing climate without reducing climate change to only temperature. **Driver Indicators** Factors that change the Earth's radiative balance. Natural climate drivers include changes in the sun's energy output, regular changes in Earth's orbital cycle, and large volcanic eruptions. Human-caused climate drivers include emissions of heat-trapping gases (GHGs) and changes in land use. **Impact Indicators** The effect/result of interaction between climate phenomena, related hazards, vulnerability, and exposure. Increased heat, drought and insect outbreaks, all linked to climate change, have increased wildfires. Health impacts in cities due to heat, rainfall, and mosquito-borne illness; or coastal flooding and erosion are other examples.

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<sup>4</sup> <https://toolkit.climate.gov/content/glossary>

[Please See TBCSAP Preliminary Recommendation:  
RRAP Climate Change Indicators]

# HOW DO WE GET THERE?

<b>OBJECTIVE 1.1</b>	Inventory, interpret and distribute existing climate indicator and impact data to be used in local implementation through collaborations with local and national scientists.
<b>OBJECTIVE 1.2</b>	Ensure effective and broad communication of information and data and regional consistency in the use of climate change data to ensure consistent decision-support.
<b>OBJECTIVE 1.3</b>	Increase the accessibility of data through an online regional climate data repository

## Objective 1.1

Improve the collection and monitoring of climate indicator data to be used in local implementation through collaborations with local and national scientists.

Actions	
Revise RRC MOU to outline opportunities and roles for monitoring data, updating the online data repository, and identifying ongoing regional data needs.	<p><b>Lead Organization:</b> TBRPC</p> <p><b>Partners:</b> CSAP, Local governments</p> <p><b>Comprehensive Plan Themes:</b> Coastal, Capital Improvement</p> <p><b>Topic Tags:</b> Climate Science</p>
TBRPC staff will continue to work with member governments and Resiliency Coalition Partners to	<p><b>Lead Organization:</b> TBRPC</p> <p><b>Partners:</b> CSAP, Local governments</p>

identify data needs that might be considered in future updates of the	<b>Comprehensive Plan Themes:</b> Coastal, Capital Improvement <b>Topic Tags:</b> Climate Science
Convene the CSAP at minimum every five years to review and update SLR projections/other indicators.	<b>Lead Organization:</b> CSAP <b>Partners:</b> TBRPC, Local governments <b>Comprehensive Plan Themes:</b> Coastal, Capital Improvement <b>Topic Tags:</b> Climate Science
The CSAP will partner with, engage and encourage local universities and state/regional scientific partners to improve monitoring.	<b>Lead Organization:</b> CSAP <b>Partners:</b> TBRPC, Local governments <b>Comprehensive Plan Themes:</b> Coastal, Capital Improvement <b>Topic Tags:</b> Climate Science
Establish a region-wide data working group to include private sector stakeholders and equity experts to identify standards and best practices in visualization of data and to ensure the data remains accessible on an ongoing basis.	<b>Lead Organization:</b> CSAP <b>Partners:</b> TBRPC, Local governments <b>Comprehensive Plan Themes:</b> Coastal, Capital Improvement <b>Topic Tags:</b> Climate Science
The TBRPC and regional scientific partners will identify and apply for grants to monitor climate data and a make it accessible.	<b>Lead Organization:</b> TBRPC <b>Partners:</b> CSAP, Local governments <b>Comprehensive Plan Themes:</b> Coastal, Capital Improvement <b>Topic Tags:</b> Climate Science

## Objective 1.2

Encourage regional approach to risk communication, regional consistency in the use of climate change data to ensure consistent decision-support.

Actions	
The TBRPC and CSAP will identify best practices for use of data to ensure consistency in use of data by local governments in advance of their decision making/policymaking.	<b>Lead Organization:</b> TBRPC <b>Partners:</b> CSAP, Local governments <b>Comprehensive Plan Themes:</b> Coastal, Capital Improvement <b>Topic Tags:</b> Climate Science

The TBRPC will partner with the CSAP to establish guidance on how to communication risk for various audiences.	<b>Lead Organization:</b> TBRPC <b>Partners:</b> CSAP, Local governments <b>Comprehensive Plan Themes:</b> Coastal, Capital Improvement <b>Topic Tags:</b> Climate Science
Local governments will utilize the recommended data indicators and sources when updating their comprehensive/strategic plans.	<b>Lead Organization:</b> TBRPC <b>Partners:</b> CSAP, Local governments <b>Comprehensive Plan Themes:</b> Coastal, Capital Improvement <b>Topic Tags:</b> Climate Science

## Objective 1.3

Increase the accessibility of data through regional workshops and an online regional climate data repository.

Actions	
Create an online regional database/repository of climate indicator data sources, links, for easier and access and to facilitate localized climate analysis and decision-support.	<b>Lead Organization:</b> TBEP, TBRPC <b>Partners:</b> CSAP <b>Comprehensive Plan Themes:</b> Coast, Capital Improvement <b>Topic Tags:</b> Climate Science
The TBRPC will partner with local organizations to provide training and facilitated discussions with local governments as to how to implement and use the data.	<b>Lead Organization:</b> TBRPC <b>Partners:</b> CSAP, Local governments <b>Comprehensive Plan Themes:</b> Coastal, Capital Improvement <b>Topic Tags:</b> Climate Science
Ensure the information on the online regional repository is accessible broadly to stakeholders and groups of varying abilities. (ADA)	<b>Lead Organization:</b> TBRPC <b>Partners:</b> CSAP, Local governments <b>Comprehensive Plan Themes:</b> Coastal, Capital Improvement <b>Topic Tags:</b> Climate Science

## Regional Targets

1. Revise RRC MOU to outline opportunities and roles for monitoring data, updating the online data repository, and identifying ongoing regional data needs.

2. Establish a region-wide data working group to include private sector stakeholders and equity experts to identify standards and best practices in visualization of data and to ensure the data remains accessible on an ongoing basis.
3. The TBRPC and regional scientific partners will identify and apply for grants to monitor climate data and a make it accessible.
4. Create an online regional database/repository of climate indicator data sources, links, for easier and access and to facilitate localized climate analysis and decision-support.

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