Virginia Eastern Shore Coastal Resilience Tool
Introductory Workshop & Training Manual

Instruction Guidelines

Overview

This is a brief guide to help you show others how to use the Coastal Resilience Tool for the Eastern Shore of Virginia. You will need copies of the following for the participants:

- Skills & Exercise List
- Glossary of Terms
- Tips and Hints

Below you will find the Learning Outcomes as a guide to what is covered in the Skills and Exercise List and what participants should be able to do once they have worked through that list with you. First complete the

Learning Outcomes

A. Participants will be able to:
   1. Briefly explain the purpose, use and limitations of the Coastal Resilience Tool to support decision-making.
   2. Activate and use the **Flood & Sea Level Rise** app and set the following parameters:
      a. **Choose a Data** Source for **Basic Inundation** or **Storm Surge**
      b. **Scenario Year**
      c. **SLR** (Sea Level Rise)
      d. **Storm Type**
      e. Additional Layers
      f. **Opacity**
   3. Activate and use the **Future Habitat** app and set the parameters for:
      a. **Choose Parameters**
      b. **Scenario Year**
      c. **Draw a User Defined Area** and **Zoom to Selection**
      d. Choose a Habitat
      e. **Filter by Habitat of Interest**
      f. Find the analysis results in the **Results & Chart** tab and the **Compare & Chart** tab.
   4. Activate and use the **Map Layers** app and set the parameters for:
      a. Set the data points on the map within the following layer options:
         i. **Base Data**
         ii. **Infrastructure**
         iii. **Coastal Management**
         iv. **Habitats**
         v. **Physical Features**
         vi. **Social & Economic**

b. Set the **Opacity**
c. Use the layers in combination with other apps
d. Use the **Clear All** function to remove all layers

5. Briefly explain the Key Points of the **Flood & Sea Level Rise**, **Future Habitat** and **Map Layers** app as follows:
   a. The difference between Low, High, and Highest SLR (sea level rise)
   b. The Year Scenarios
   c. Inundation
   d. Storm Surge
   e. Opacity
6. Activate the **Split Screen and Lock** tool to show two maps and use apps to compare data in two maps.
7. Use the map tools to **Search** for an area, draw a **User Defined Area**, zoom in and pan around an area and use the apps on that particular area.
8. Use the **Save and Share** function to save a map, copy the link and share it with others for later use a particular map.

Skills to Complete

I. CR Tool Basic Skills – Navigation & Apps

Flood & Sea Level Rise App – Basic Inundation Option

SKILLS COMPLETED
____**Choose Basic Inundation, set SLR to High and Scenario Year to 2040, 2065, 2100**
____**Choose Basic Inundation, set SLR to Highest and Scenario Year to 2040, 2065, 2100**
____**Click on the zoom in [+] and zoom out [-] tools, and pan around the map using the mouse**
____**Return map to the full extent main view**

Future Habitat App

SKILLS COMPLETED
____**Choose Scenario Year 2065, set SLR to HIGH, click on Click to Draw an Area, create a box around a particular area, click on Zoom to Selection, and filter results by salt marsh**

Flood and Sea Level Rise App - Storm Surge Option

SKILLS COMPLETED
____**Choose Storm Surge, set Scenario Year to 2040, set Storm Type to Nor'Ida, then to Moderate Intensity**
____**Choose Storm Surge, set Scenario Year to 2065, set Storm Type to Moderate Intensity, and set Depth or Difference to Water Depth**
____**Under Additional Layers, select Show Tidal Range**

Map Layers App and Use with Future Habitat

SKILLS COMPLETED
____Map Layers with Future Habitat App: **Click on Map Layers. Under Infrastructure, click checkboxes for Roads vulnerable to 1 ft., 2 ft. and 3 ft. Sea Level Rise. Open Future Habitat and set Scenario Year to 2065 and SLR to High. Look at how the roads have been covered by water or marshes. Zoom in [+] for a better view.**

II. Next Level Skills – Additional Tools

Search Tool, Imagery, Use of Split Screen, & Measuring

SKILLS COMPLETED
____Search tool and imagery: **Map 1: Type the location Brownsville, Virginia, into the search bar, open the Basic Inundation App, set Choose SLR to Low, set Scenario Year to 2100, select Imagery from the background layer dropdown menu, and change the Flood & Sea Level Rise Layer Properties slider to more transparent.** **____Split screen and measuring:** **Map 2: Click on Split View, minimize open apps, click on Link Maps, change the background layer of Map 2 to Imagery, open the Basic Inundation App in Map 2, set Choose SLR to High, set Scenario Year to 2100, and minimize the app. Compare the inundation maps for Brownsville in the present and future conditions. Click on the measure tool and measure the length of the narrow pond at Brownsville by clicking once at the start and double-clicking at the end.** **____Save and Share function**

Exercises

Work through the Exercises in the Skill and Exercise List. Once these are completed you can try examples of your own or suggested by the participants

1. Future Habitat App – Use of the Brownsville, VA Map
2. Flood & Sea Level Rise Storm Surge App – Quinby, Virginia
3. Future Habitat App – Saxis and Onancock, VA

Use of the Tool in Decision-Making

Using the examples given or ones that apply to your area, discuss how the Tool can be used to support decision-making, as well as its limitations.