

## Memo

To: Those involved with rebuilding from Hurricane Sandy  
From: The National Disaster Preparedness Training Center (NDPTC)  
<https://ndptc.hawaii.edu/>  
Subject: Capabilities Assessment Tool  
Date: December 3, 2012

There are 100s of ways to reduce risks from coastal flooding.

The National Disaster Preparedness Training Center (NDPTC) is delivering a course on Coastal Flood Risk Reduction and as an element of this course has prepared a "Capabilities Tool" to help coastal stakeholders identify the best course of action available for their community.

We would like to make this Tool available to those helping Hurricane Sandy communities recover.

We only ask that as you use the tool, you notify us on how the tool is being used and how it can be improved.

### Tool Mechanics:

The Capabilities Tool offers over a 100 measures that have been used to reduce risks from flooding. They are presented as an Excel Spreadsheet and in a PDF text format.

Within the spreadsheet formatted rows identify flood risk reduction measures that can be sorted within the following column categories.

- A Structural / Non Structural
- B General Category
- C Specific Category
- D Name/Description
- E Approaches/ Tools
- G – H Buffers -- Off Shore
- I Coastal Floodplain Adaptation
- J – L Buffers -- Up Stream

Rows list specific capabilities and include a brief description as a cell comment under the capability "Name/Description" (Column D). Rows A through C are described below. Rows E through L are self-explanatory. All row categories can be sorted as to the column heading.

- A Structural / Non Structural
- B General Category
  - Adaptation

- Buffers Manmade
- Buffers Natural
- Building Codes
- Development and Landuse
- Hazard Disclosure / Information Dissemination
- Planning
- Revenue / Expenditures

#### C Specific Category

- Adaptation
  - ✓ Retreat
  - ✓ Accommodation
  - ✓ Retreat
- Buffers Manmade
  - ✓ Protection -- Coastal
  - ✓ Protection -- Riverine/Coastal
  - ✓ Protection – Upland
- Buffers Natural
  - ✓ Protection -- Coastal
  - ✓ Protection -- Riverine/Coastal
  - ✓ Protection – Upland
- Development and Landuse
  - ✓ Euclidian Zoning
  - ✓ Formbased Zoning
  - ✓ Incentive Zoning
  - ✓ Subdivision
  - ✓ Other
- Hazard Disclosure / Information Dissemination
- Planning
  - ✓ Functional
  - ✓ General Community Plans
  - ✓ Special Plans
- Revenue / Expenditures
  - ✓ Expenditures
  - ✓ Revenue: Grants
  - ✓ Revenue: Insurance
  - ✓ Revenue: Taxing - Direct
  - ✓ Revenue: Taxing- Indirect

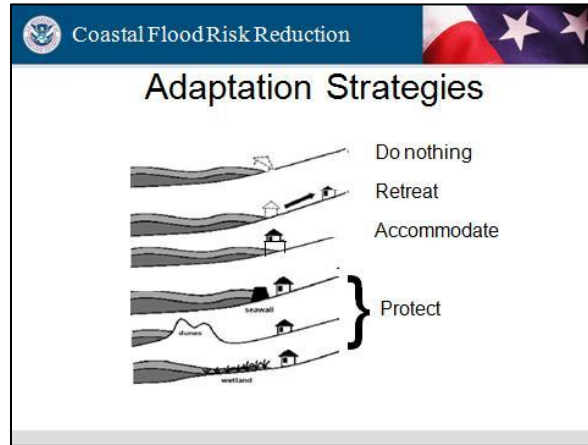
#### **Tool Philosophy:**

The Capabilities Tool defines capabilities as Approaches and Tools. Approaches offer the method to be used in addressing an objective. An example would to elevate a home above the base flood level. Tools are devices needed to implement the approach such as adopting a zoning ordinance that requires new homes to be elevated above the level of flooding.

Approaches that adapt to change on the coastal floodplain are further categorized as those achieving a community objective through:

- retreating

- accommodating
- protecting



Protection or buffering approaches can absorb energy from the sea or land and can be sorted accordingly

- From the sea, buffers can be:
  1. off shore
  2. near shore
  3. beach oriented
- From the land, upstream buffers can be located in the:
  - a. upper watershed
  - b. middle watershed
  - c. lower watershed

Below is a PowerPoint slide from the Coastal Flood Risk Reduction Course illustrating approaches as buffers, or lines of defense, protecting The Netherlands from Land and from Sea forces.

