Can Salt Marsh Plants Help Your Community Adapt to Population Growth and Climate Change?

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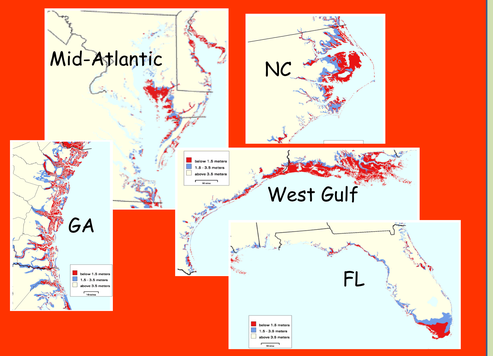
Salt marsh plants may help combat climate change while helping us in one or all of the areas below or one we haven't thought of yet. Help us out with your suggestions.

- **Sea Level Rise is a Consequence of Climate Change at the Coast.**
- **More than half of the U.S. population lives within 50 miles of the coast.**



With a 70 cm rise in sea level, the area depicted in red would be flooded during spring tides. Sea level is likely to rise 55-60 cm over the next 100 years.

Restoring Wetland Landscapes

Excavating for a new marsh.

Aerial view of marsh before planting.

Selected plant varieties grown for planting buffer zones and restoration projects.

New marsh was created to replace one displaced during bridge construction.

Creating Buffers at the Water's Edge

Natural buffer between upland and tidal wetland in Delaware.

Buffer zone trees killed by salty tidal water (note trees in the background).

Phragmites invading the field.

Agricultural field damaged by salt water during high tides.

Planting a mixed-species buffer at the wetland-upland ecotone.

Seashore mallow is a perennial plant useful for restoration, buffer zones, seed and stem products, and coastal home landscapes subject to periodic flooding.

Seashore mallow's fleshy root system captures nutrients in buffer zones, makes mallow a perennial salt-tolerant crop, and sequesters carbon from the atmosphere, thereby combating global warming.

Treating Wastewater

Traditional biosolids drying bed cleaned each drying cycle.

"Stripes" variety of *Phragmites* developed especially for preventing spread of the plant to natural wetlands.

Phragmites drying bed cleaned only after years of use.

Composting biosolids from the *Phragmites* drying beds mixed with chicken litter and wood chips.

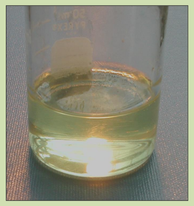
Producing Biofuel and Bioheat

Field of mallow

Harvesting mallow with traditional farm equipment.

Seed Products

seed



oil

meal

Stem Products

stems

Paper/fiber

ethanol

Thanks for your support Patricia & Charles Robertson Fund, Great Pond Fund, National Biodiesel Board/DOT & DOE, NOAA Sea Grant, NOAA Estuarine Habitat Program, EPA,!!