

SEA LEVEL RISE LEARNING NETWORK

Adapting Conservation Strategies to Global Climate Change

The **Sea Level Rise Learning Network** is a group of Nature Conservancy staff and partners working across organizational and geographic boundaries to create, apply, test and refine conservation strategies to address the challenges posed by rising seas.

Goals

- Increase TNC and partner capacity to use proven conservation methods, strategies and approaches to manage for sea level rise
- Create best practices and the expertise to apply them by innovating, testing and documenting new methods, strategies or approaches
- Involve local communities in addressing sea level rise management
- Coordinate organizational actions across boundaries to achieve effective conservation

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CLIMATE CHANGE POSES ONE OF THE GREATEST CHALLENGES TO PEOPLE and nature. It is already changing our lives and the places we live, and will have a dramatic and lasting impact on plants, animals, people, economies and our way of life.

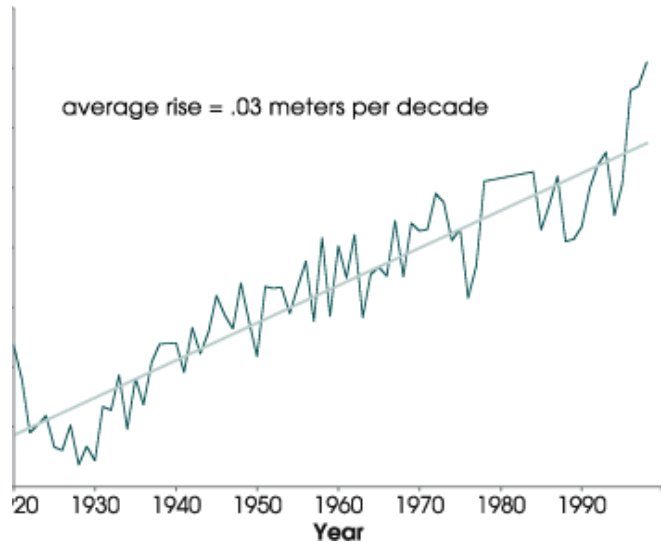
Our coasts have enormous economic and aesthetic value. In a very real sense, we have built our culture and our economy on its shores. Almost half of the Earth's 6.5 billion people live within 100 miles of a coastline, and nearly 10 percent of all people on Earth live less than 10 meters above sea level. Coastal communities throughout the world are threatened by rising seas.

The Intergovernmental Panel on Climate Change (IPCC) recently estimated that sea level will increase globally by up to 24 inches during the 21st century. Many climate scientists now suggest that a one to five meter rise in sea level is more likely by 2100 given melting of the Greenland and Antarctic ice sheets and the thermal expansion of ocean water.

In addition to working to reduce overall greenhouse gas emissions and address climate change impacts through U.S. and international policy efforts, The Nature Conservancy is taking steps to focus attention on climate change issues related to sea level rise (SLR) and to begin designing strategies to prepare coastal areas for the future. Recognizing that no single approach works everywhere, the Conservancy will work with others to reduce threats and identify and adapt strategies appropriate to the natural, economic, social and political circumstances in each place.



Sea Level Rise, Battery Tide Gauge, New York, NY



More than 180 countries have populations living in the low-elevation coastal zone, including many of the world's major urban areas: Tokyo, New York, Mumbai, Shanghai, Jakarta and Dhaka (Source: G.McGranahan, D.Balk, B.Anderson in *Environment and Urbanisation*, 2007). Coastal population centers at low elevations like New Orleans, Key West and other spots around the world are vulnerable to sea level rise. LEFT: Florida's Key West floods routinely in springtime reach 1.7 ft. above mean sea level. (Photo courtesy National Weather Service Forecast Office, Key West; NOAA Photo Library.) RIGHT: In New York, the Battery tide gauge measured an increase in sea level of roughly .25 meters since 1920. (Graph based on data from the Goddard Institute for Space Studies).

Marine Challenges

Coastal and island ecosystems—marshes, mangroves, tidepools, mudflats and dunes—will be especially vulnerable to accelerating sea level rise.

Climate change will alter landscapes and seascapes. We analyze the impacts of global warming on plants, animals and natural communities and seek innovative conservation solutions that will enable natural systems to cope with and adapt to what may be unavoidable effects of climate change.



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FY08 Network Objectives

- Assemble steering committee to guide the direction of the network, including staff from TNC marine and climate change teams and coastal operating units.
- Conduct needs assessment to identify particular issues and challenges facing TNC staff and partners and quantify training, management and resource requirements.
- Complete preliminary analysis of sites most susceptible to sea level rise and develop preliminary management recommendations.
- Recruit network membership and sponsor at least one opportunity for members to meet at network sites. These will be opportunities to provide training, receive input on needs assessment and vulnerability analysis and build the network community.

- Develop communication and outreach strategy and means for members to collaborate and share information, e.g., website, list serve, newsletter.
- Evaluate the relationship of the Sea Level Rise Learning Network to TNC's broader climate adaptation work which helps managers build resilience to climate change into marine conservation action.

Addressing climate change is essential to fulfilling The Nature Conservancy's mission. We have a major stake in the problem, and are uniquely positioned to make a difference.

Taking action to reduce and adapt to the extreme impacts of climate change can have positive effects on people's lives throughout the world. We have a responsibility to ourselves and to future generations to act in a timely, meaningful way to meet the climate challenge.