

Adaptation strategies for shoreline development in San Francisco bay

A feasibility study is conducted on potential strategies to adapt to the impacts of climate change on shoreline development in San Francisco Bay in this project. This study is executed by a Dutch team comprised of professionals from engineering and consulting firm ARCADIS Nederland BV and the research institutes ALTERRA and Deltares. The lead partner on the California side is the San Francisco Bay Conservation Development Commission (BCDC).

On Monday September 21 2009, the San Francisco Bay Conservation and Development Commission (BCDC) and a consortium of leading Dutch researchers and consultants – key members of the Delta Alliance – will host a symposium on climate change adaptation. At this event, the results of a joint study and adaptation measures for shoreline development around San Francisco Bay will be presented, and new ideas for future cooperation in the Sacramento-San Joaquin Delta and San Francisco Bay of California and the Delta in the Netherlands will be explored.

San Francisco Bay is the largest natural estuary on America's West coast. Much of the land surrounding the Bay started to develop after 1849 when the gold rush started. Large numbers of people settled around the Bay and as land became scarce large parts were filled creating room for new development. Currently over 7 million people live in the so called 'Bay Area'. Many of the filled areas are just 1 meter above sea level. This means that these areas are extremely vulnerable to climate change.

Historical records show that sea level in San Francisco Bay has risen 18-20 cm over the past 150 years. The Intergovernmental Panel on Climate Change and the 2006 California Climate Action Team Report project that mean sea level will rise between 10 and 90 cm by the year 2100. Sea level rise models indicate that a 30 cm rise in sea level would shift the 100-year storm surge-induced flood event to once every 10 years. With each flood event, the Bay Area stands to lose valuable real estate, critical public infrastructure, and natural resources.



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