

Case Study: What can New Orleans learn from Venice?

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Over the last 100 years of its existence the city of Venice has suffered floods. These floods are the result of unusually high “meteorological tides” normally occurring between October and March. During this winter season, large storm systems set up over the Adriatic and Italy creating low atmospheric pressure and winds (coming from either the north or the south) that set up storm surges resulting in tides far exceeding the normal astronomical tide. These “high tides” impact the whole lagoon of Venice, flooding, among several locations, the City of Venice that lies in its center. It is clear that the flooding frequency and magnitude has increased over the last 100 years as a result of sea level rise and subsidence of the City and surrounding areas. To protect the Lagoon and the City, tidal gates are being built at the entrance of each of the three inlets into the lagoon. These gates will be closed during storms, keeping the lagoon at a lower level than the Adriatic, hence preventing the flooding. Similar systems exist in the Netherlands and in England (London). Venice, the Netherlands and England have been used as potential analogs for solutions to the problems of New Orleans. Look in particular at the article of February 2006 in Scientific American by Mark Fischetti (links below) you have also been provided with a short article on the Venice situation. In class we will explore how Venice and New Orleans are similar or different. Please read the articles and be ready to discuss the following questions:

How is the physical and geographical nature of the storm forcing and of the cities similar or different?

How will a “barriers/dikes” solution work for New Orleans, do you see any problems?

What about the socio-economic-political setting, how are they the same or different?

Is the Netherlands an analog?

What are the implications of action or inaction in both Venice and New Orleans?

What may be the environmental concerns of flood protection schemes of this type?

What are the historical similarities/differences between Venice and New Orleans?

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