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ENSC 350-01

Persuasive Speech Outline

Introduction:

1. Tangier Island, off the coast of Virginia, in the Chesapeake Bay, is at risk of being underwater within the next 50 years (VICE News 2016).
2. Subsidence is the term used to describe the gradual sinking of an area. Due to land composition, erosion, and rising sea levels, the speed at which Tangier Island and other coastal towns along Virginia’s Chesapeake Bay are sinking is rapidly increasing.
3. If nothing is done to counteract the faster rate of sinking, many loved Virginia coastal towns and cities will eventually be underwater.
   1. Preview Statements:
      1. First, we will look at risk factors of subsidence in the Chesapeake area.
      2. Next, we will analyze how erosion and rising sea levels have worsened subsidence.
      3. And finally, we will look at what can be done to help slow or stop this issue.

Body:

* 1. The coastal area of Virginia, near the Chesapeake, is already at risk of sinking overtime.
     1. Much of Virginia’s coast is already at or near sea level (topographic-map.com)
     2. The land composition of some areas in this region, such as Tangier Island are more prone to erosion.
        1. Muddy, sandy marshland which is more susceptible to erosion caused by storms, wind, and sea level rise.
  2. Rising sea levels, which quicken erosion, have worsened subsidence in this area.
     1. Subsidence already leads to higher relative sea levels and an increase in flooding. Through climate change, thermal expansion, and melting of glaciers, this increase is sea level is higher than usual. This worsens risk of flooding.
  3. There are negative effects on personal lives, society, and the economy when cities go underwater.
     1. As the land sinks, sea levels rise, and flooding overtakes these areas, hundreds and eventually thousands of people will be displaced.
        1. Flood into areas that cannot accommodate them.
        2. Leave behind possessions and investments which is expensive for them and the government (flood insurance programs).
     2. Furthermore, entire industries, such as Tangier’s fishing industry, are completely wiped out.
        1. Less people in the area to work and damaged infrastructure.

Transition: Due to these risk factors and negative effects…

1. The best solution to dealing with faster subsidence in the Chesapeake Bay area is beach nourishment.
   1. Beach nourishment is the act of artificially building out the shore wider (or taller), to offset sediment loss (Prasetya).
   2. This is a temporary fix that buys people and industries time to move further inland.

Conclusion:

1. In conclusion, the State of Virginia must proactively recognize the increasing speed of subsidence and the risks that poses to the population and industry in the area, to avoid cities going completely underwater within the next 50 years.

Bibliography

*Chesapeake Topographic map, elevation, terrain*. topographic. (n.d.). Retrieved October 12, 2022, from https://en-us.topographic-map.com/map-6g5k/Chesapeake/?center=39.65646%2C-75.98145&popup=37.9875%2C-76.19156&zoom=6

Prasetya, G. (n.d.). Chapter 4 protection from Coastal Erosion. Retrieved October 12, 2022, from https://www.fao.org/3/ag127e/ag127e09.htm

Shoreline Erosion Advisory Service. (n.d.). Retrieved October 12, 2022, from https://www.dcr.virginia.gov/soil-and-water/seas

VICE News. (2016, November 7). *This Virginia Island is literally sinking into the sea*. YouTube. Retrieved October 11, 2022, from https://www.youtube.com/watch?v=FKih6nRw2d8