Gulf Coast Region

The Texas coastline is especially vulnerable to global warming due to its unique topography, ecology and economic development.

Sea Level Rise

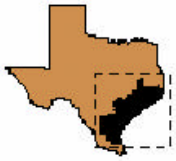
Global warming is likely to accelerate the historical rise in sea level through warming of oceans and melting of ice, which in turn will affect coastal development, wetland resources, and recreation along the Texas coast. The impacts of sea-level rise will occur in coastal areas that are continually evolving and already face a wide range of natural and human-induced stresses, including erosion, storms, land subsidence, wetland loss, and environmental degradation from recreation and development pressures.

Recent studies project a 17-inch sea level rise in the Houston-Galveston area over the next century. This sea level rise will aggravate groundwater contamination by intruding saltwater and make necessary additional protective barriers such as seawalls that cost about $7 million per mile (Schmandt, 1995). The US EPA estimates that the cumulative cost of sand replenishment to protect the coast of Texas from a 20-inch sea level rise by 2100 is estimated to cost as much as $12.8 billion.

Air Quality

Houston, the fourth largest city in the US, is virtually tied with Los Angeles as the smoggiest cities in the nation. **Projected high temperatures from global warming would enhance the formation of ground-level ozone and other toxic chemicals associated with smog.** Global warming is expected to increase the length of the already long smog season in Texas.

Region Profile
-Gulf Coast-



Population (2000) - 5,972,461

Significant sources of greenhouse gases:

- Petroleum Refining
- Electric Utilities
- Transportation

Hot Spots

Higher Temperatures to 115ºF heat index

25% reduction in Brown Shrimp catch

Increased smog levels

17-inch higher sea levels

Ecosystems

Changes in rainfall and runoff from upland regions coupled with sea level rise would accelerate the loss of coastal wetlands and estuaries thus threatening Texas' natural habitats as well as tourist destinations. **Studies show that vital coastal industries like brown shrimp could experience losses of 25 percent over the next century.**