

Notes for Natural Climate Change

- **Global climate due to Earth's position in relation to the Sun (habitual zone) and the Greenhouse effect.**
- **Greenhouse Effect – Light waves from the Sun enter Earth's atmosphere and change to infrared waves that get trapped by greenhouse gases, warming the planet. (carbon dioxide, water vapor, and methane)**
- **Ice ages in the past due to plate tectonics and shifting ocean currents.**
- **Current Natural Climate Change – El Nino and La Nino**
- **Normal Conditions – Trade winds blow warm surface currents westward, across the Pacific Ocean, from South America towards Australia.**
 - **The warm surface water results in lots of rain on the east coast of Australia.**
 - **As the warm surface water is pushed away from western coast of South America, cool, nutrient rich water rises to the surface – upwelling.**

- **El Nino (Little Boy) – Warm Phase**
 - Trade winds weaken resulting in less rain in Australia which leads to drought and wildfires.
 - Upwelling stops on the west coast of South America and flooding and storms occur all along the west coast of North America.
 - Stops the hurricanes in the Atlantic Ocean.
- **La Nina (Little Girl) – Cool Phase**
 - Trades winds grow stronger than normal resulting in lots of rain and flooding in Australia.
 - Lower western side of North America (California, New Mexico, Arizona) experience drought and wildfires.
 - Southeast coast of North America experiences warmer weather and more hurricanes.