Increased greenhouse gases from human activities result in climate change and ocean acidification.

**CLIMATE CHANGE = OCEAN CHANGE**

**CO₂**

The world’s ocean is a massive sink that absorbs carbon dioxide (CO₂). Although this has slowed global warming, it is also changing ocean chemistry.

**HOW YOU CAN HELP**

- Shrink your carbon footprint to reduce greenhouse gases.
- Drive less.
- Reduce, reuse or recycle.
- Purchase energy-efficient appliances and lightbulbs.
- Print less. Download more.
- Use less water.
- Reduce the use of lawn and garden chemicals.
- DO NOT dump household chemicals in storm drains.
- Choose sustainable seafood. www.FishWatch.com
- Learn about good reef etiquette and practice it when in the water.
- Volunteer for beach and waterway clean ups.

**CLIMATE CHANGE dramatically affects CORAL REEF ECOSYSTEMS**

- Warming Ocean
  - thermal stress
- Sea Level Rise
  - sedimentation
- Changes in Storm Patterns
  - stronger, more frequent storms
- Changes in Precipitation
  - increased runoff of freshwater, sediment & land-based pollutants
- Altered Ocean Currents
  - change in connectivity & temperature regimes
- Ocean Acidification
  - a result of increased CO₂
  - pH reduction in pH levels

- **CORAL BLEACHING**
- **SMOTHERING OF CORAL**
- **DESTRUCTION OF REEF STRUCTURE**
- **ALGAL BLOOMS & MURKY WATER**
  - reduces light
- **LACK OF FOOD AND DISPERSAL OF LARVAE**
- **DECREASES GROWTH RATES AND STRUCTURAL INTEGRITY**

**Impacts are immediate and long term, direct and indirect - A weakened coral is vulnerable.**