

# CHAPTER 19: CLIMATE DISRUPTION AND OZONE DEPLETION

## 19-1 Temperature and Climate Change in Future

- Weather vs Climate

- Climate Change is Not New

- The Natural Greenhouse Effect

- Human Activities and Greenhouse Gases

● Human Activities and Recent Atmospheric Warming

● CO<sub>2</sub> Emissions

● Waste Heat

● The Sun's Role

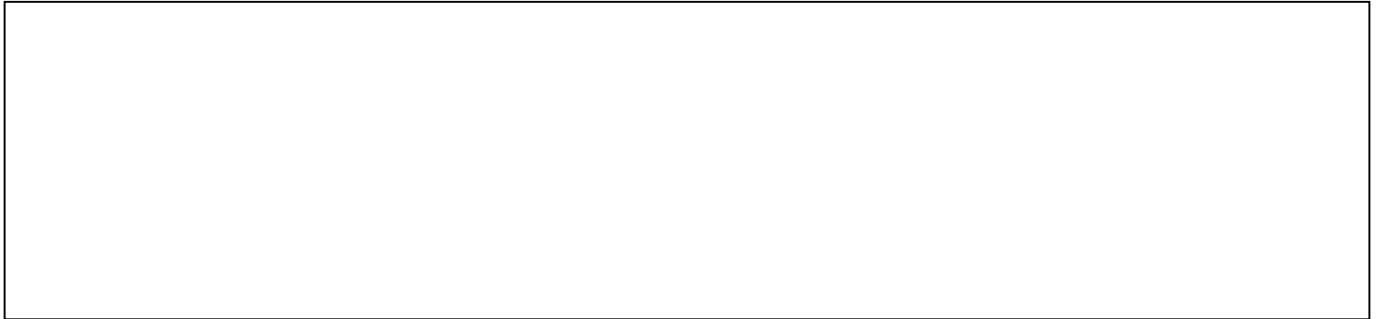
● The Ocean's Role

● Effects of Cloud Cover

● How Outdoor Air Pollution Can Slow Atmospheric Warming

## 19-2 Effects of a Warmer Atmosphere

### ● Serious Consequences



### ● Severe Drought



### ● Melting Ice and Snow



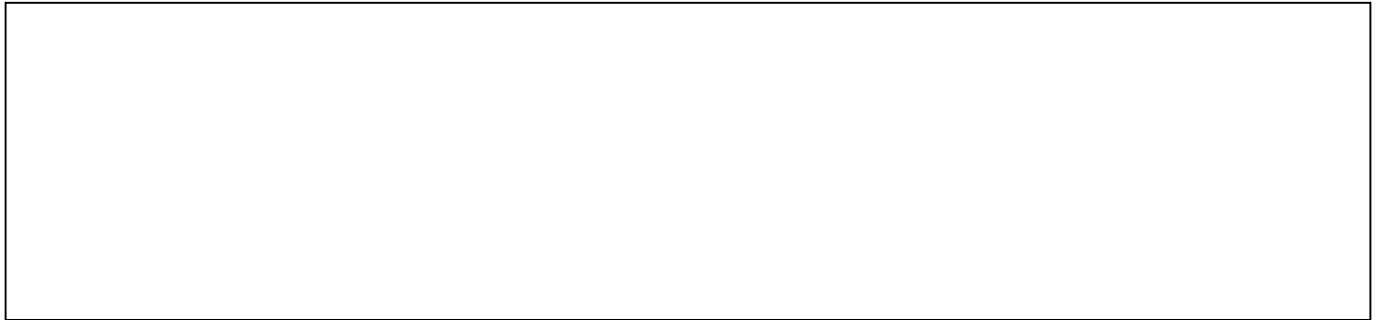
### ● Melting Permafrost



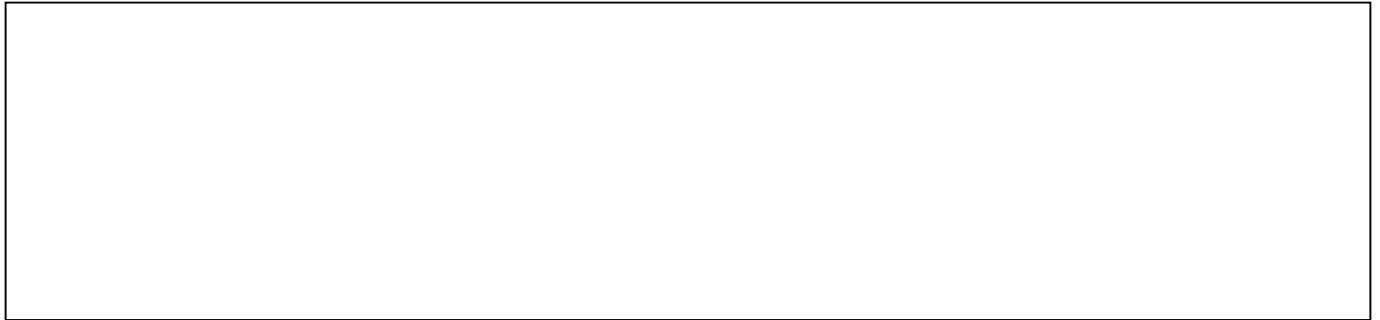
● Rising Sea Levels



● Extreme Weather



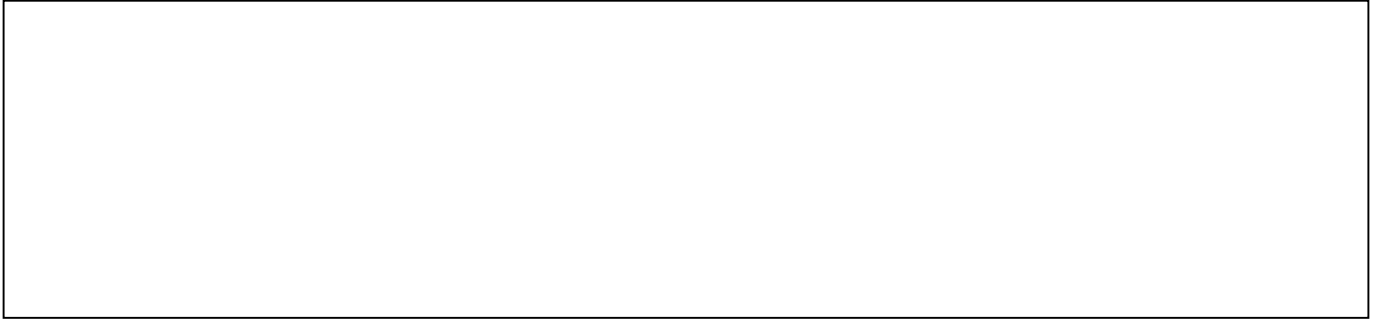
● Threat to Biodiversity



● Overall Decline For Agriculture



• Warmer World = Health Threats



## 19-3 Slowing Projecting Climate Disruption

### ● Dealing With It is Difficult

### ● Options

### ● Prevent/Reduce Greenhouse Gas Emissions

### ● Collect Emissions and Stash `em

● Geoengineering Schemes

● Governments Can Reduce the Threat

● International Climate Negotiations

● Leading the Way

● Reducing Carbon Footprints – Companies and Schools



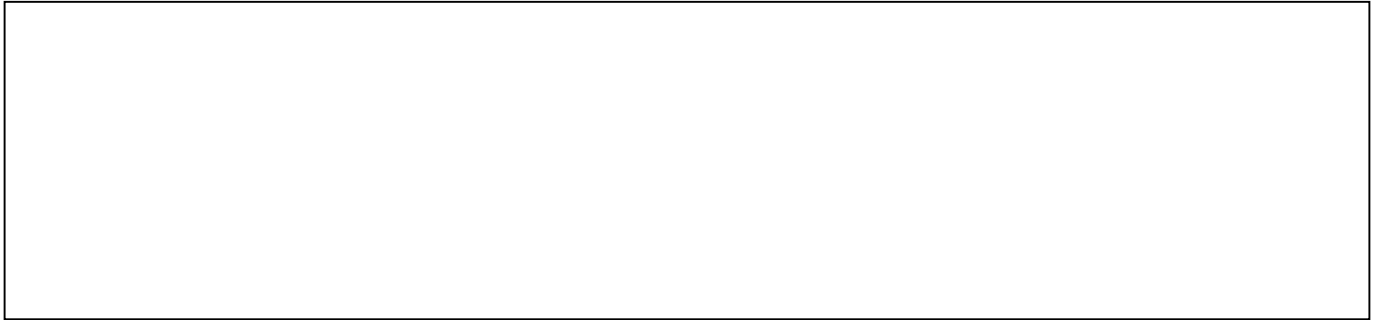
• Individual Choices

• Preparing For Climate Disruption

• No-Regrets Strategy

## 19-4 Ozone Depletion in the Stratosphere

### ● Threats to the Ozone Layer



### ● Why Worry?



### ● Reversing Stratospheric Ozone Depletion

