Mitigation and Adaptation

- Mitigation is avoiding the unmanageable
- Adaptation is managing the unavoidable

Mitigation and Adaptation

- Mitigation involves attempts to slow and reverse climate change by reducing GHGs
- Adaptation involves attempts to protect people and the environment by reducing the impact of climate change

TRANSPORTATION

- Burning gasoline and diesel fuels produces CO_2, CH_4, and N_2O

- Transportation produces 27% of U.S. GHG emissions (fastest growing sector)

What our cities can do

- Reduce fleet emissions, purchase fuel-efficient, hybrid and/or non-petroleum powered vehicles
- Encourage staff to use public transportation, carpools and bicycles
- Choose suppliers with fuel efficiency/alternative fuel standards
- Purchase from local suppliers
- Institute a no-idling policy for vehicles

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What Our Cities Can Do


HCWH, Practice Greenhealth


Danilo Rizzuti, freedigitalphotos.net


Freedigitalphotos.com, Simon Howden

Examine current energy consumption

Install on-site renewable energy

Purchase energy efficient products

Reduce "standby" energy use

Educate staff members about energy conservation strategies

What our Cities Can Do

- **Install on-site renewable energy capability**
- **Purchase renewably generated electricity**

WASTE DISPOSAL AND MANAGEMENT

- City offices generate significant amounts of waste
- Transporting waste for disposal consumes energy and produces GHGs
- Waste disposal produces GHGs
  - Landfills: CH_4
  - Waste incineration: N_2O and CO_2
- Extracting, processing, and transporting virgin resources produces emissions

Photos: HCWH, Practice Greenhealth

What Your Cities Can Do

- Recycle
- Compost
- Buy products that are recycled, reusable and have minimal packaging (precycle)
- Dispose of waste locally
- Educate staff about what constitutes hazardous waste

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FOOD SERVICE

- Livestock production produces 18% of global GHG emissions
- The U.S. food system relies heavily on fossil fuel inputs
- Cities can encourage a move toward sustainability in food production, processing, distribution and in the composting of food waste

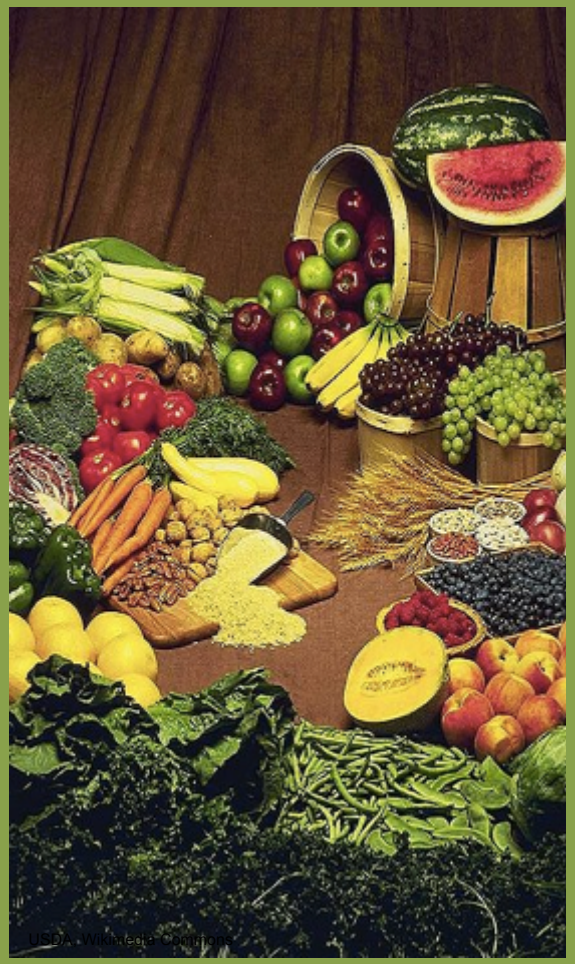

HCWH, WHO


HCWH, Practice Greenhealth


HCWH, Practice Greenhealth

What our cities can encourage

- Reduce the amount of meat
- Buy local and seasonal food
- Procure organic food when possible
- Grow food locally
- Prevent waste in food services
- Compost food waste



WATER CONSERVATION

Climate change will cause droughts, glacier melt and aquifer depletion which all exacerbate the problem of water scarcity

Our cities use vast amounts of water and can play an important role in water conservation

What Your City Can Do

- Monitor its own water use
- Install low-flow and other water-efficient technologies
- Use drought-resistant plants in landscaping
- Repair leaks
- Collect and store rainwater and other recycled water for non-drinking purposes
- Eliminate the purchase and sale of bottled water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Successful Climate Change Preparedness and Adaptation Strategy

- Identify and prioritize vulnerable populations and physical/ environmental vulnerabilities (promote equity)
- Build community resilience (engagement, education, empowerment)
- Monitor threats and environmental conditions
- Create emergency preparedness and response plans

Einstein: "Fortune favors a prepared mind"

Boy Scout motto: "Be Prepared"

Heat Wave Adaptation Strategies:

- Expand local green spaces and plant more trees to reduce heat islands
- Paint surfaces white (roofs, asphalt, parking lots)
- Establish heat monitoring and warning systems
- Set up local cooling centers and provide transportation to these centers
- Create social support networks across vulnerable populations

Pollen Adaptation Strategies

Monitor pollen counts

- Public warning system
- Eliminate weed-choked vacant lots and replace with non-allergenic green spaces
- Minimize outdoor activities and keep windows closed
- Bathe or shower after being outdoors
- Wash bedding, vacuum frequently

Photo: Wikimedia Commons/ Sue Sweeney

Photo: CDC

Air Pollution and Ozone Adaptation Strategies

- Establish ozone and particulate matter monitoring and warning systems
- Keep windows closed
- Avoid outdoor activities
- Exercise early in the morning or on days with low ozone levels

Vector Borne Diseases Adaptation Strategies

- Set up "early warning systems" to monitor insects, pests, invasive species and disease vectors
- Stay indoors at dawn and dusk
- Remove standing water outside where mosquitoes can breed
- Wear long pants when hiking in areas with fleas and ticks


Photo: USGS


Photo: Wikimedia Commons