POLICY MAKING:

Urban Sprawl, Climate Change, and Public Policy

- The U.S. has the most sprawled urban zones in the world

Ratio of U.S. per capita urban automobile use:

1. Australia, 1.70
2. Canada, 1.70
3. Europe, 2.47
4. wealthy Asian cities, 7.50
5. developing Asian cities, 6.04

- Per capita urban automobile ownership:
  1. U.S.: 604 automobiles per 1000 people
  2. Australian cities, 491
  3. Canadian, 524
  4. European, 392
  5. wealthy Asian, 123
  6. developing Asian, 102

- The **U.S. cities** in **Kenworthy's and Laube's (1999; *An International Sourcebook of Automobile Dependence in Cities 1960-1990; University Press of Colorado)*** *analysis were Boston, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Phoenix, Portland, Sacramento, San Diego, San Francisco, and Washington. The Australian cities were as follows: Adelaide, Brisbane, Canberra, Melbourne, Perth, and Sydney. The Canadian cities were: Calgary, Edmonton, Montreal, Ottawa, Toronto, Vancouver, and Winnipeg. European cities: Amsterdam, Brussels, Copenhagen, Frankfurt, Hamburg, London, Munich, Paris, Stockholm, Vienna, and Zürich. Wealthy Asian cities: Hong Kong, Singapore, and Tokyo. Developing Asian cities: Bangkok, Jakarta, Kuala Lumpur, Manila, Seoul, and Surabuya.*

Comparative Per Capita CO2 Emissions

- 1. U.S. – 20.4 tons
- 21. Russia – 10.6
- 22. Germany –10.4
- 29. Japan – 9.5
- 88. China – 2.7

Top Four States in Energy Consumption

- 1.) Texas 12.5 trillion BTU
- 2.) California 8 trillion BTU
- 3.) Florida 4.3 trillion BTU
- 4.) New York 4 trillion BTU

Distribution of Florida Energy Consumption

- Residential: 30 percent (3rd ranking state)
- Commercial: 24 percent (4th ranking state)
- Industrial: 14 percent (17th ranking state)
- Transportation: 33 percent (3rd ranking state)

Florida Per Capita Energy Consumption Over Time

- 1990 – 254.0 BTU
- 2002 – 255.5 BTU
  - (in hundred thousands)

Pro-Urban Sprawl Policies

- Mortgage subsidies through the Federal Housing Authority
- Low Energy Taxes
- Cheap Oil Policies:
- Through Foreign Relations
- Aggressive Road Building
- Land Use Zoning

Why did the U.S. Reject the Kyoto Protocol?

- According to an 1998 Energy Information Agency report, in order to meet the Kyoto Protocol target coal consumption in the U.S. would have to drop between 18 and 77 percent from current projected rates by 2010, and petroleum use would have to be reduced between 2 and 13 percent.

- According to the EIA report, electricity prices increase from 20 to 86 percent in 2010 if the Kyoto Protocol was implemented by the US, and "the average price" of gasoline would be between 11 and 53 percent higher.

- Given that the European Union as a whole and Japan have more compact cities and emit less carbon dioxide per capita than the U.S., their costs associated with reducing carbon dioxide emissions are substantially lower than that of the U.S.

- Sources: Nordhaus, William and Joseph Boyer. 2000. *Warming the World: Economic Models of Global Warming.* Cambridge, MA: MIT Press, and Uzawa, Hirofumi. 2003. *Economic Theory and Global Warming*. New York: Cambridge University Press.

Conclusion

- In order to effectively combat climate change, and avoid catastrophic global warming, a political commitment has to be made to dramatically reduce energy consumption. Redesigning U.S. cities, including those in Florida, to be more compact is the first step toward developing an environmentally rational society. A society that minimizes the emission of dangerous greenhouse gasses and conserves irreplaceable fossil fuels.