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Copenhagen: a Case Study of one of the Most Sustainable Cities in the World

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Copenhagen is a coastal city in Denmark that is leading the way in sustainable development. Through innovative technologies and policies, they provide the globe with a model for mitigating human's impact on the earth.

**Copenhagen aims to be Carbon Neutral by 2025**
- Integrating Climate into Energy Supply
- Greener Transport
- Energy Efficient Buildings
- Copenhageners and Climate
- Climate in Urban Development
- Adapting to the Future Climate

### Energy Efficient Buildings
Goals: 10% of total CO₂ reductions will be achieved through construction and renovation projects
- Expected savings of 2 million Euros/year in energy savings from municipal buildings
- The Adelgade cooling plant takes cold seawater from canals and pumps it through pipes to cool homes. Every degree Celsius saved by using this system saves 15% on electricity
- Heating will come from biomass fuel and geothermal systems

### Greener Transport
Goals: By 2015, 85% of the city's vehicles will be electric, hydrogen, or hybrid powered.
- Electric cars will run on wind energy
- By 2015, 50% of Copenhageners will commute on bicycles

### Copenhageners and Climate
- After switching from a collective water bill shared by apartment buildings to individual water meters, water consumption fell by 26%.
  - **Moving forward:**
    - Through citizens' daily efforts, Copenhagen will achieve 4% of its CO₂ reduction goal.
    - Copenhagen will establish new educational institutions, such as its new virtual climate science center, which will motivate Copenhageners to participate in sustainable practices.

### Adapt to the Future Climate
The most pressing issues for the coastal city of Copenhagen are sea level rise and increased precipitation, which can lead to damaging floods. Also, as population rises, cities around the world are vulnerable to the "heat island effect", so Copenhagen must also plan for and minimize heat waves.

#### Pocket parks & Green Roofs
- This process fuels 77% of energy consumption of the treatment plants, and
- Excess sludge at sewage plants undergoes a conversion process to be used as energy and heat.

### Water
Copenhagen has taken measures to modernize its sewage system and wastewater treatment plants, which has reduced urban flooding, reintroduced biodiversity, saved energy, and created space for recreation.
- Instead of draining wastewater into the harbor, it is stored in rainwater reservoirs until there is adequate space in the sewage system
- Excess sludge at sewage plants undergoes a conversion process to be used as energy and heat.
- Careful cooperation with neighboring coastal cities prevents overexploitation of freshwater resources.