



WASTE MANAGEMENT

Introduction



NATURE AND ECOSYSTEM

- Urban biodiversity is a variety and richness of living organisms and habitat diversity found in and the edge of human settlements.
- This biodiversity range from the rural fringe to the urban core.
- European cities provide habitats for many common and protected species – there is 5000 km² of urban areas within the EU are protected sites – Natura 2000.



NATURE AND ECOSYSTEM

- By human activity was changed 75 % of the mainland and 66 % of the marine environment.
- In the EU there is in a good shape just 23% of animal species and 16 % of biotopes from origin habitats nowadays.



WASTE

- Municipal solid waste (MSW) consists of everyday items that are discarded by members of the public, including our homes, schools, business, and trees.
- Most municipal solid waste can be reused, repaired, recycled, or used as fuel to produce energy.
- When we will change consumer behavior we can also change a composition of MSW and reduce it.



WASTE

- 502 kg of municipal waste per capita was generated in the EU in 2019.
- Only 48 % of municipal waste in the EU was recycled (material recycling and composting) in 2019.



MOBILITY

- Urban mobility counts for 40 % of all road transport-related CO2 emissions up to 70% of other transport pollutants.
- Sustainable mobility is central to the success of a city and has a strong influence on the quality of life. It is a key to creating a sustainable city.
- Sustainable transport requires an infrastructure of public transport (bus, train, tram, metro, ferry) and active mobility roads (walking and cycling) to connect the most frequented points in the city.



BENEFITS OF SUSTAINABLE MOBILITY

- Benefits are:
 - **Economic growth** - traffic congestion reduces productivity and costs at least € 100 billion, reducing journey times while improving access to employment. The city also become more attractive,
 - **Reduced carbon** emissions and enhanced air quality
 - **Reduce noise** exposure, increase social interaction

Cleaner and lower carbon modes can reduce a city's carbon emissions!



ENERGY

- It is widely recognized that increasing GHG emissions from human activities are a large contributor to climate change.
- Energy-related emissions account for almost 80% of the EU 's total GHG emissions.
- Energy use in town and cities account for more than a half of GHG emissions caused by human activity in the EU.



2030 TARGETS OF ENERGY EFFICIENCY

- The 2030 Climate and Energy framework builds upon three key targets:
 - At least 40% cuts in GHG emissions from 1990 level
 - At least 27% of EU energy comes from renewable sources
 - 27% improvement in energy efficiency



2030 TARGETS OF ENERGY EFFICIENCY

- The EU´s convent and major initiatives provide cities with the guidance and tools to meet the goals by Convent of Majors, Sustainable energy and climate action plan SECAP submission, and regular submission of implementation reports.



BUILDINGS IN THE CITIES

- Buildings represent the largest untapped source of cost-effective energy-saving and CO2 reduction potential within Europe.
- When we will improve the energy performance of buildings, it will have:
 - social benefits; for example, reducing fuel poverty, improving health; environmental benefits;
 - carbon saving, and reduce air pollution;
 - energy system benefits too.
- Renovating the nation ´s buildings improves the health and the wealth of its citizens.



CLIMATE CHANGE ADAPTATION

- Cities have to take measures to deal with climate change, otherwise, the cities become a safety hazard place to live for their citizens.
- Cities can adapt with Natural based solutions, sustainable water infrastructure, sustainable mobility, and sustainable land use planning.
- Nature-based solutions often offer a multitude of benefits, including air quality, recreational space, and water management.
- There is also a citizens participation needed.