Module 4 Lesson 1 - The Components of Urban Ecology

Sunday, October 9, 2022 3:52 PM

4.1.1 Introduction

- Three primary sub-systems within urban ecology:
  - The built environment
  - Urban Social Systems
  - The bio-physical environment

4.1.2 Infrastructure Systems

- Physical infrastructure of cities → interconnected & nested systems
  - exist at different scales & across a wide range of locations

- Cities are complex, thermodynamically open, and self-organizing
  - ↳ often thought of as organisms in their own right
  - ↳ this idea is known as **Urban Metabolism**

4.1.3 Urban Societies

- Social system in cities involve social interactions between strangers
  - unlike rural social systems
  - ↳ influence human behaviour
  - ↳ include families, neighborhoods, organizations, government, businesses, etc.

People's behaviour can impact built & bio-physical systems within the urban ecology

4.1.4 Livability

- Livability
  - quality of interactions between people and their urban environment
  - encompasses human needs (e.g. food, security, cultural awareness, equity, etc.)
  - indicators:
    - air quality
    - Walkability
    - Sports activities
    - volunteerism within city's communities

- air quality
- sports activities
- walkability
- volunteerism within city's communities
- working conditions
- affordability of housing
- cultural activities

Know how to define "Livability" & describe possible indicators.
Also describe an application of livability within a city

4.1.5 Ecosystem Services in Cities

- Air & water purification
- habitat preservation
- Waste decomposition
- noise control
- soil & nutrient cycling
- aesthetic & cultural
- climate & radiation regulating
- raw materials and products