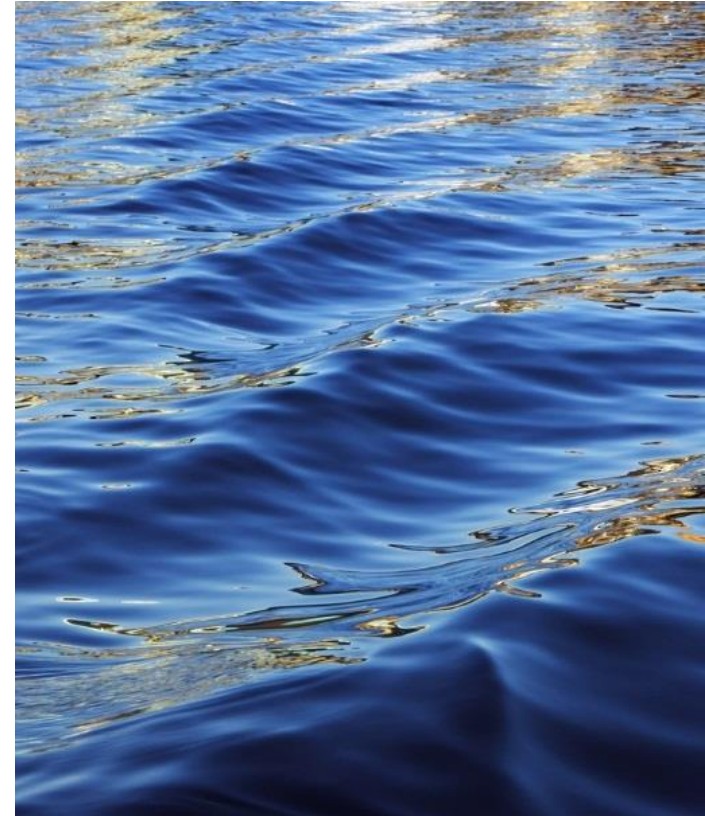


ENV 101: Environmental Issues in Real Estate

Topic 1:
Basic understanding of the
environment and related terminology

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What is Environment?

- Environment is a set of all factors with which a **living subject interacts**, and all the surroundings which encompass it.
- Environment encompasses the whole of life on earth and the **complex interactions** that link the **living world with the physical world** (non-living).



Basic Definitions:

Carrying Capacity

- Carrying capacity is the **maximum size of a population** that the resources in an area can **sustain indefinitely** without significant degradation or depletion of the resources.
- Carrying capacity is not static for an area as it may be **extended** as a result of **technological or social advances** or **reduced** as a result of **resource degradation**

Resources:

Renewable (forest, fisheries):

- Refills faster than we use up.
- Extensive and drastic use may cause it to become non-renewable.

Non-renewable (Minerals, fuels)

- Exists in fixed amounts or consumed faster than the refill period.
- The rate of replacement by natural processes is negligible in our lifetime.

Basic Definitions:

Ecological Footprint

- The Ecological Footprint represents the **productive area required** to provide the **renewable resources** humanity is using and to **absorb its waste**.
- The amount of the environment necessary to produce the goods and services necessary to **support a particular lifestyle**.
- Each person's Ecological Footprint is dependent upon **choices they make** in their own life, such as how much they drive, recycle, and purchase new products.



Basic Definitions:

Ecological Footprint

- **Our current global situation:** Since the 1970s, humanity has been in an **ecological overshoot** with annual demand on resources exceeding what Earth can regenerate each year.
- It now takes the Earth **one year and six months** to regenerate what we use in a year
- Footprint calculator:
<https://www.footprintcalculator.org/>



Basic Definitions:

Ecological Footprint



Carbon Footprint

- The carbon footprint takes into account **only the activities** related to **greenhouse gas emissions**. Those are direct methods such as fossil fuel burning, and indirect methods such as the consumption of electricity.

Public Good:

- Object which is **available to everyone**, yet the **monetary value** of which **cannot be derived in the market**.
- Consumption of public goods by one does not reduce the quantity for others. Example: Lighthouse, Clean air, etc.
- Public goods are **non-excludable**. For example, it's not possible to exclude some ships (those who didn't pay) from enjoying the benefits of the lighthouse while at the same time providing the benefits to other ships.
- **Non-rivalrous** because if the lighthouse's benefits are already being provided to some ships, it costs nothing for additional ships to enjoy the benefits as well.

Public Good, Free Riders & Externalities:

- Public goods have non-rivalry in consumption and non-excludability which lead to the **free-rider problem**.
- The free rider problem pops up when someone **can consume** a good **even if they didn't pay for it**.
- Externalities pop up whenever the **benefit or cost of consuming a good affects** people **who aren't consuming** it. They come in two forms: positive and negative externalities.

Common Pool Resource:

- A common-pool resource is a hybrid between a **public and private good**. It is **shared (non-rivalrous)** but also **scarce**. Common-pool resources are subject to the **tragedy of the commons**, where everybody acting for their benefit over-consumes the resource, depleting it for all.
- It is a resource that benefits a group of people but provides **diminished benefits** to everyone **if each individual pursues** his or her **self-interest**.
- Example: fisheries, forests, underwater basins, etc.

Sustainable Development:

- Sustainable development is development that **meets the needs of the present without compromising the needs of future generations**

SUSTAINABLE DEVELOPMENT GOALS



THANK YOU!

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