

# Summary of Lecture 1

Economics is concerned with decision making by agents, which include consumers, firms, government agencies, and non-profit organizations like environmental advocacy groups.

everyone in environmental studies must:

understand the fundamentals of economic thought

understand how the way of economic thinking is applied to environmental problems and to environmental policy.

therefore, our course will focus on the following main points:

how economics proceeds to analyze resources related problems and how it attempts to solve them

what is the behavior of consumers and firms and other economic agents in dealing with environmental problems?

Understanding the concept of the common good of society

Examining main economic tools to solve environment related problems.

## **How could policy maker manage the behavior of economic agents?**

An obvious difficulty in making reasonable statements about consumers is that there is no single consumer but rather (innumerable) numerous consumers who are different: in terms of: tastes, financial resources, cultural background, education, profession, gender and others.

An obvious difficulty in making reasonable statements about firms is that there is no single firm but rather (innumerable) numerous firms which are different: in terms of: location, size, type of technology, and type of industry.

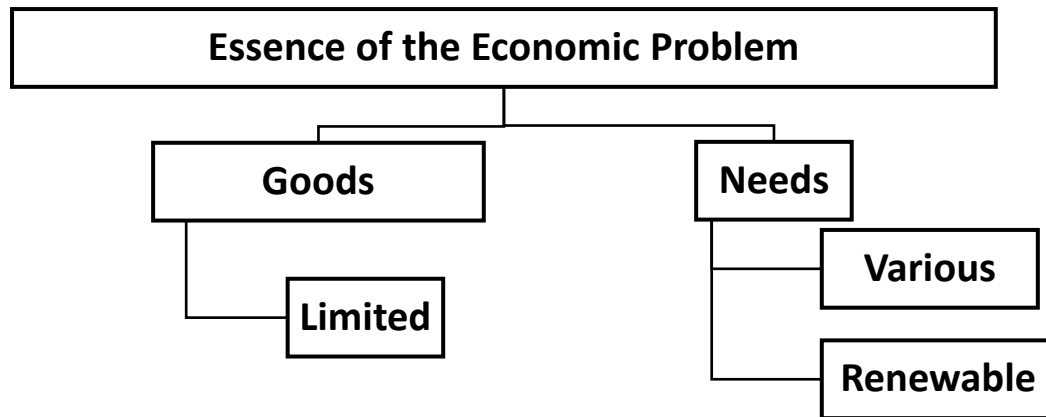
So when economics makes statements about the decisions and behavior of consumers and firms, it is neither specifically referring to particular consumer nor particular firm. Instead, it is referring to the decisions and the behavior of “dummies” (generic entities), which are thought to be useful serving as representatives of consumers and firms, respectively.

So, the role of economic theory is to depict the behavior of economic agents, e.g., consumers, firms, and governments, environmental advocacy groups, in a simplified model. In such model, the interaction and the conflict among these economic agents are represented.

## **Economics: What is it About and How Does it Relate to the Natural Environment?**

Economics is a soft science that aims at solving the problem of scarce resources.

Economic problem is represented in the existence of various and renewable needs and limited goods. This can be summarized in the following diagram.



### 1) Needs

A need is a feeling of suffering or dissatisfaction, e.g., Hunger, fear, loneliness, rejection and boredom.

Abraham Maslow classified human needs as following:

At the bottom of the hierarchy, basic needs or physiological are located: hunger, thirst, tiredness or pain.

At the next level above the basic needs, safety needs are located: fear and anxiety.

At the third level, belongingness and love needs are located.

At the fourth level, Esteem needs are located.

at the top level, self-actualization needs are located.

Maslow stressed the point that needs at lower levels are stronger than needs at higher levels, while both remain unfulfilled. Moreover, needs at higher levels are unimportant, even non-existent, as long as needs at lower levels are unsatisfied. And, once the needs at lower levels are satisfied, other needs at higher levels come into focus.

In economics, human beings are endowed (and burdened!) with needs and are permanently attempting to satisfy those needs. Moreover, the needs of human beings are perceived as principally unbounded. Thus, the question arises of what is required to satisfy those needs.

### 2) Goods (commodities) and Services

In economics, a good is commodity, or a physical, tangible item that satisfies some human need, or something that people find useful or desirable and make an effort to acquire it. A service is an intangible item that satisfies some human need. It is considered as actions undertaken by other people which satisfy our own needs, such as: banking, education, insurance, and transportation.

Many goods have the ability to satisfy human needs directly, and such goods are called consumer goods. The more consumer goods are consumed, the more satisfaction is obtained. The previous statement is true till a certain level, then additional units of a certain good may implies a decline in the degree of satisfaction.

Another classification of goods is based upon the two criteria of excludability of use and rivalry in use. This classification is of special importance for economists because certain problems arise concerning the provision of goods which do not exhibit the characteristics

of excludability and/or rivalry. such problems are crucial in the case of some natural goods, and cause, for example, phenomena like global warming and overfishing.

**Excludability of use** means the possibility of preventing potential users of a good from actually using it, after the good has already been provided. If, however, non-excludability is a feature of a good, it is not possible to prevent any person from using the good once it has been provided.

Rivalry in using a certain good means that if a person A uses the good, it makes that difficult or even impossible for a Person B to use the good simultaneously.

non-rivalry means that the use of a certain good by one person does not prevent the same good simultaneously being used by many other people.

Types of goods based on previous criteria:

private goods are characterized by both excludability and rivalry, e.g., Pizza.  
collective goods are characterized by non-excludability and non-rivalry, e.g., military protection.

Club goods are characterized by excludability and non-rivalry, e.g., swimming pool.

An open access goods are characterized by non-excludability and rivalry, e.g., buffet.

#### Classification of goods

	Excludability	Non-excludability
Rivalry	Private goods	Open access goods
Non-rivalry	Club goods	Collective goods

If goods are necessary to satisfy human needs, the question immediately arises of where the goods should come from.

### 3) Production

Production means a process in which inputs are combined in a certain manner to obtain a desired output. This implies that inputs often do not have the ability to satisfy needs directly. Consequently, we use the term “investment good or capital good”, as opposed to consumer goods. Investment goods (capital goods) are types of goods that have the ability to satisfy human needs indirectly. capital goods are types of goods that are utilized to help increase future production, such as equipment.

Note that the distinction between consumer goods and investment goods does not always depend on the characteristics of a certain good but often on its mode of use. For example, the same pen could be classified as a consumer good if used for writing a personal letter, or as an investment good if used to sign a contract in a firm.

even though production exists, does this imply that nowadays human needs are perfectly satisfied?

### 4) Scarcity

Scarcity means the tension between the bounded availability of goods and the boundlessness of human needs. This implies that the provision of goods is restricted and it is impossible to satisfy all the needs of all the people simultaneously. The problem of scarcity exists at every level of cultural development.