



EUROPEAN FOREST INSTITUTE
MEDITERRANEAN REGIONAL OFFICE - EFIMED

Valuation Methods

Introduction

Robert MAVSAR
EFIMED

A wide landscape photograph showing a rocky coastline with several gnarled trees in the foreground and a blue sea extending to the horizon under a clear sky. The image is split into two panels: the left panel is dark with white text, and the right panel is a full-width view of the same scene.

[www.efi.int/
portal/efimed](http://www.efi.int/portal/efimed)



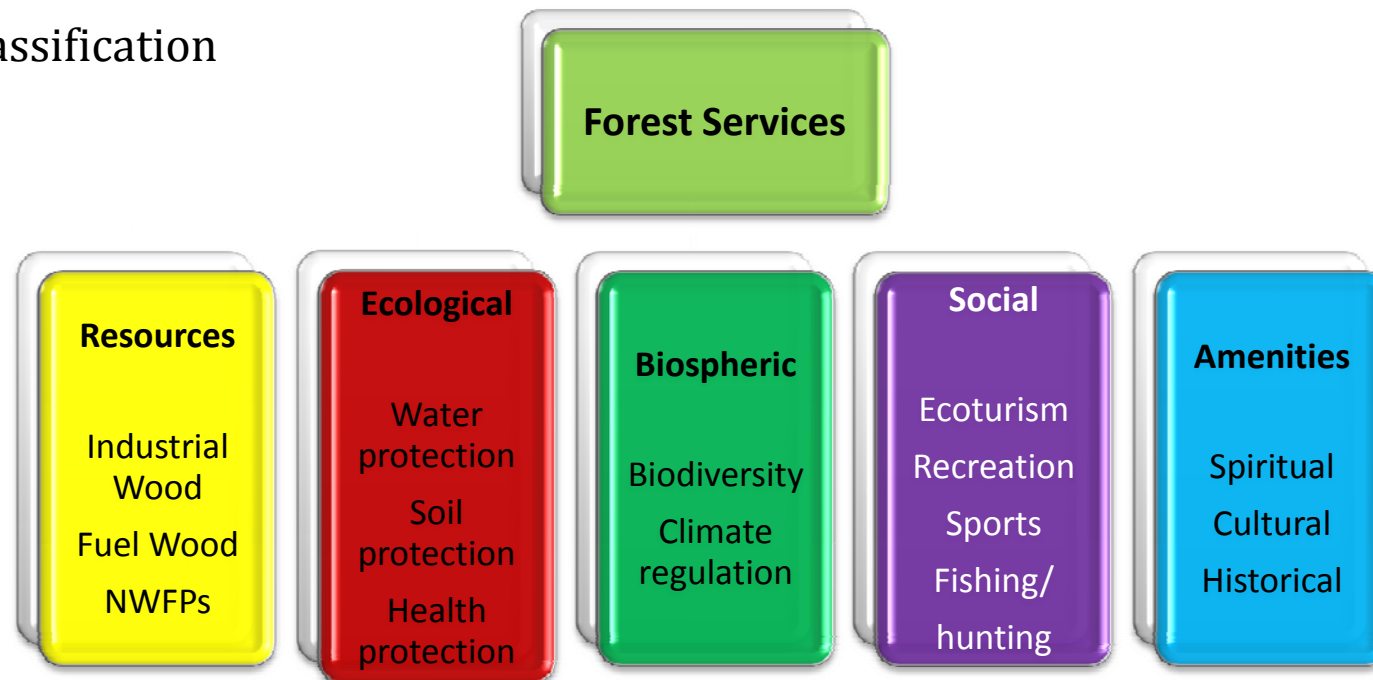
Forest goods and services in the EU

- More than 200 different goods and services were identified in the EU
- Nevertheless the list is not complete, because of continually changing uses and the importance society ascribes to different forest goods and services



Classification of forest goods and services

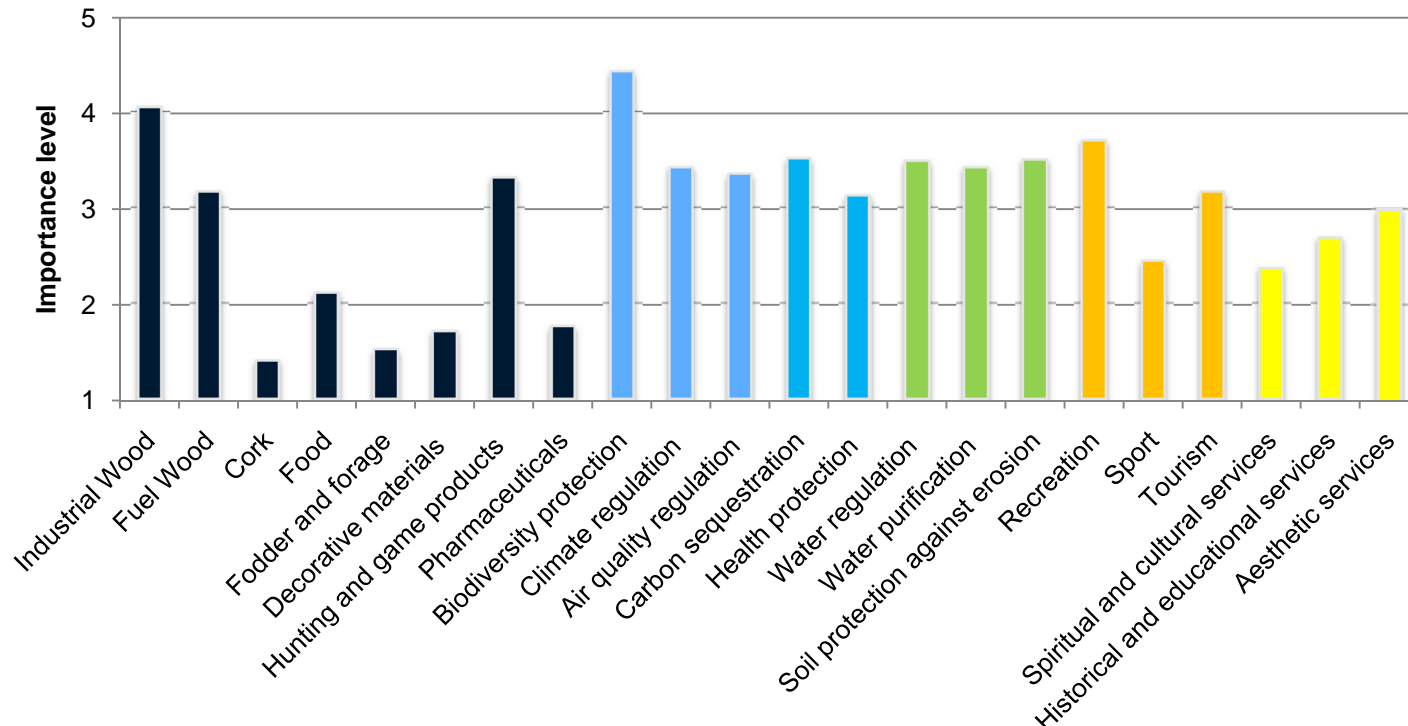
- Many classification schemes in use (example: functional, market/non-market)
- They are compatible and their application depends on the objectives of classification





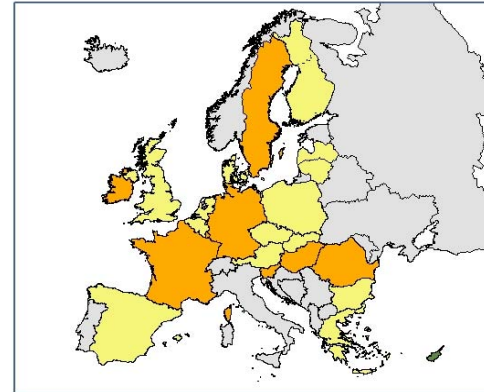
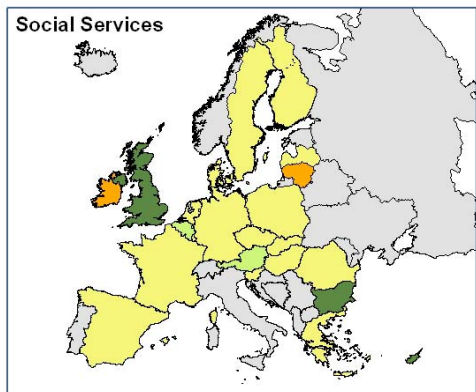
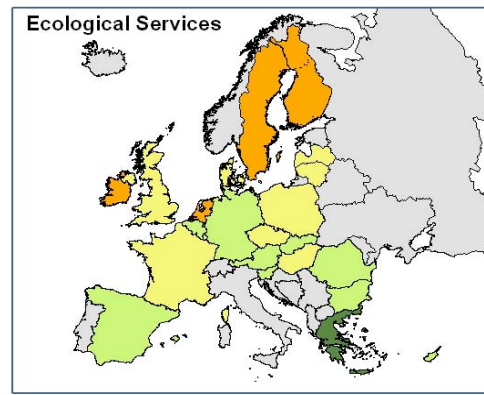
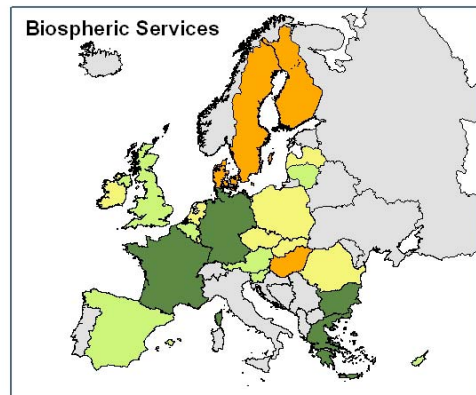
Importance of specific non-market forest goods and services in the EU

- Based on the responses to the FORVALUE questionnaire: biodiversity protection, carbon sequestration, recreation and watershed services are the most important non-market forest services
- Importance might differ with scale (local-regional vs. national-international) and between stakeholders (e.g. forest owner, environmentalist, general public)





Importance of forest goods and services in different countries



Legend

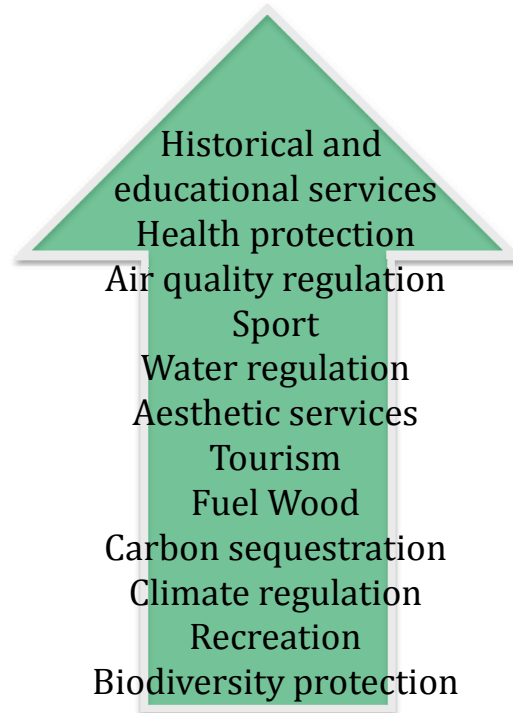


Source: FORVALUE (2008)



Trends of importance of forest goods and services

- Based on the responses to the FORVALUE questionnaire the importance of the majority of non-market forest goods and services is expected to further increase



**INCREASING
IMPORTANCE**

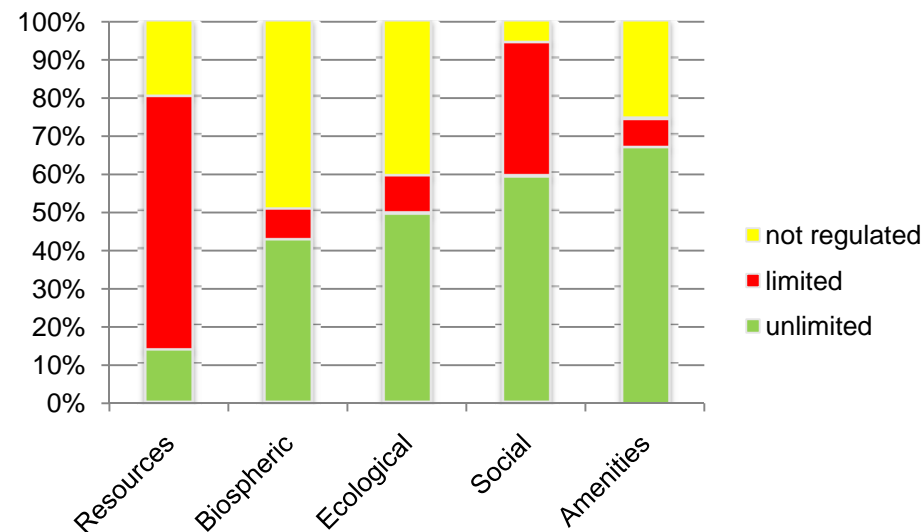


**CONSTANT
IMPORTANCE**



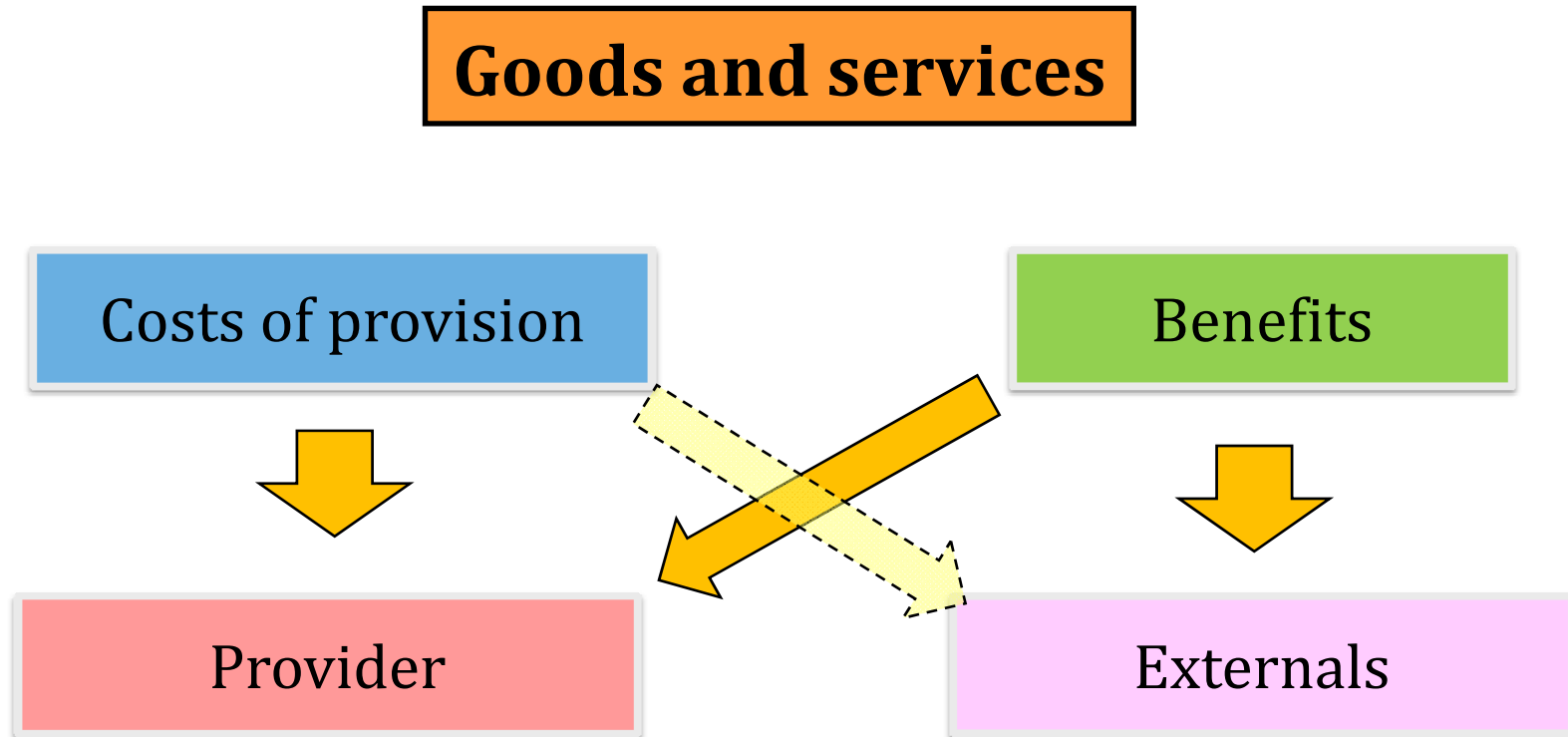
Forest ownership structure and public access to forests goods and services in the EU

- more than 60% of forests in the EU countries are private
- nevertheless the access to and use of the majority of forest goods and services is unlimited and free for the public
- Exception are market goods (timber, hunting, some non-wood forest products)





Problem





Content

We will try to answer the following questions:

- **Why** do we need to value?
- **What** do we want to value?
- **How** can we value?





But before...

What is the value and what is valuation?





Valuation

The determination of the value of a good or service





¿Value = Price?

The value is the maximum amount of money you are willing to pay for a **determinate** unit of a good.



1st bottle of
water

3€

2nd bottle of
water

2€

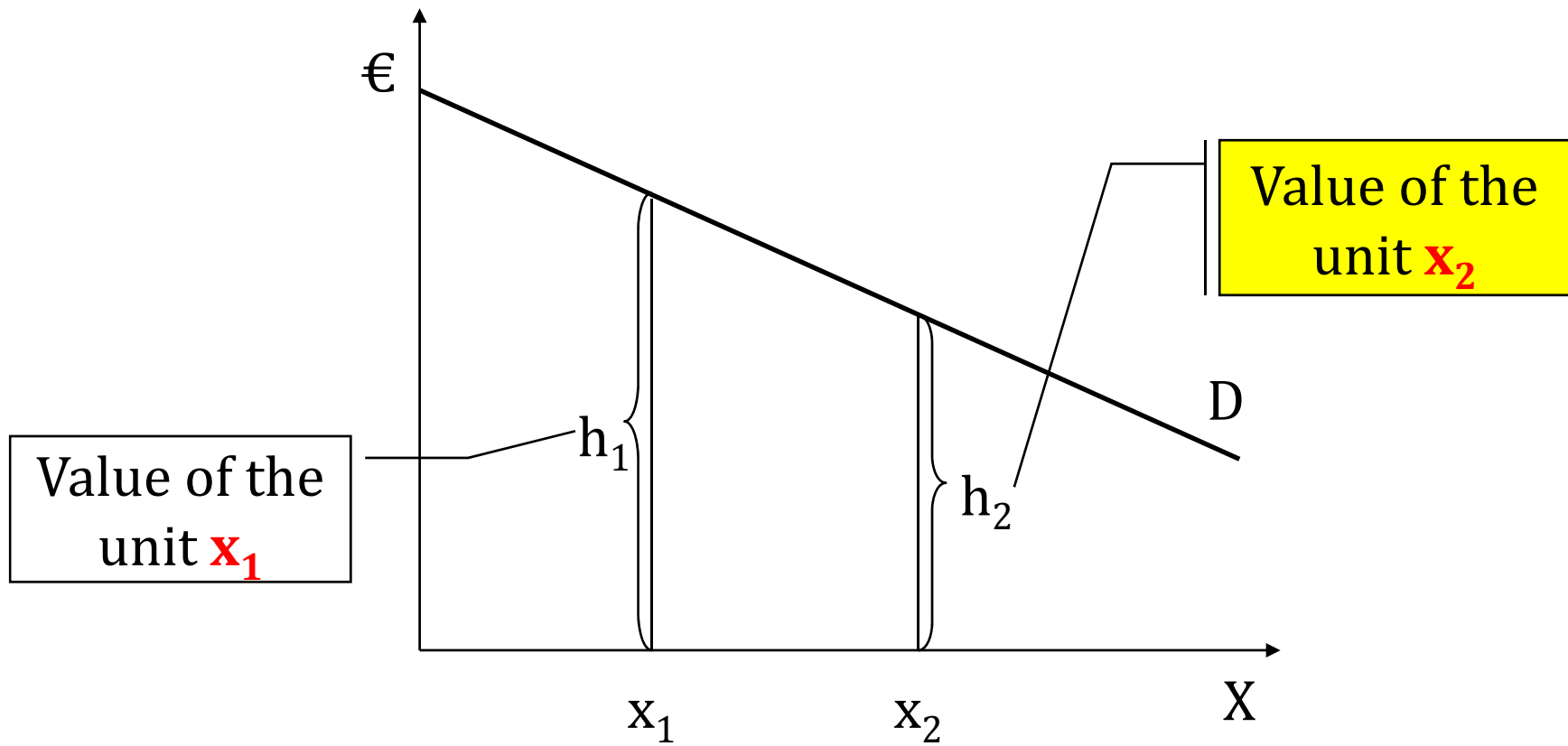
3rd bottle of
water

1€





The concept of the decreasing marginal value





Value



Use



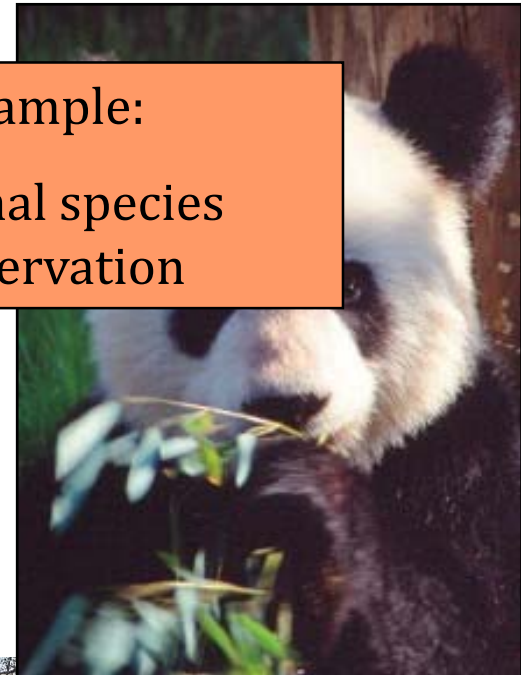
Non use

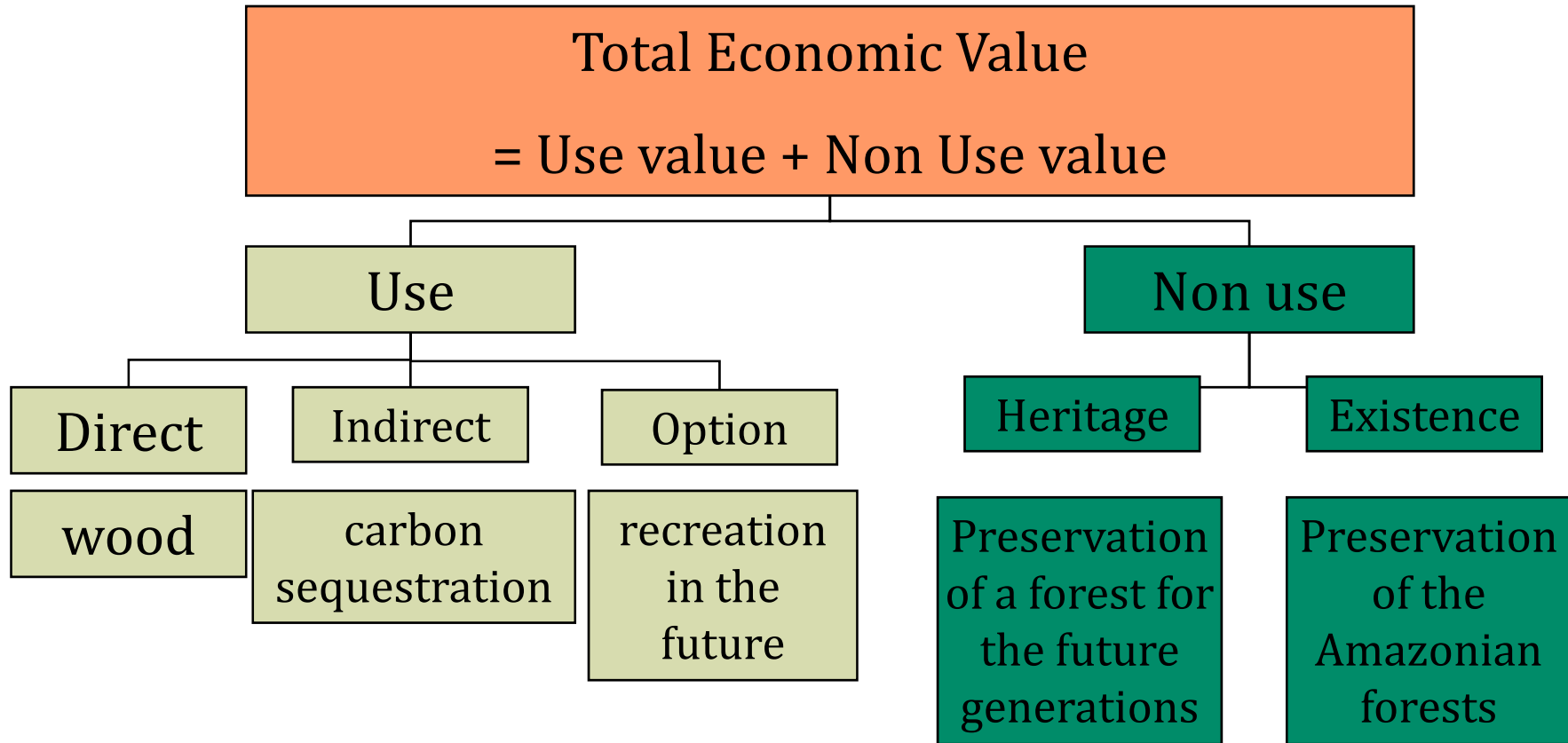
Benefits by using the goods (now or in the future)

Without direct use of goods

Example:
-Forest for recreation

Example:
- Animal species preservation



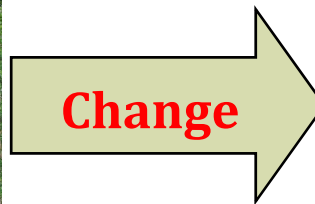




What do we value?

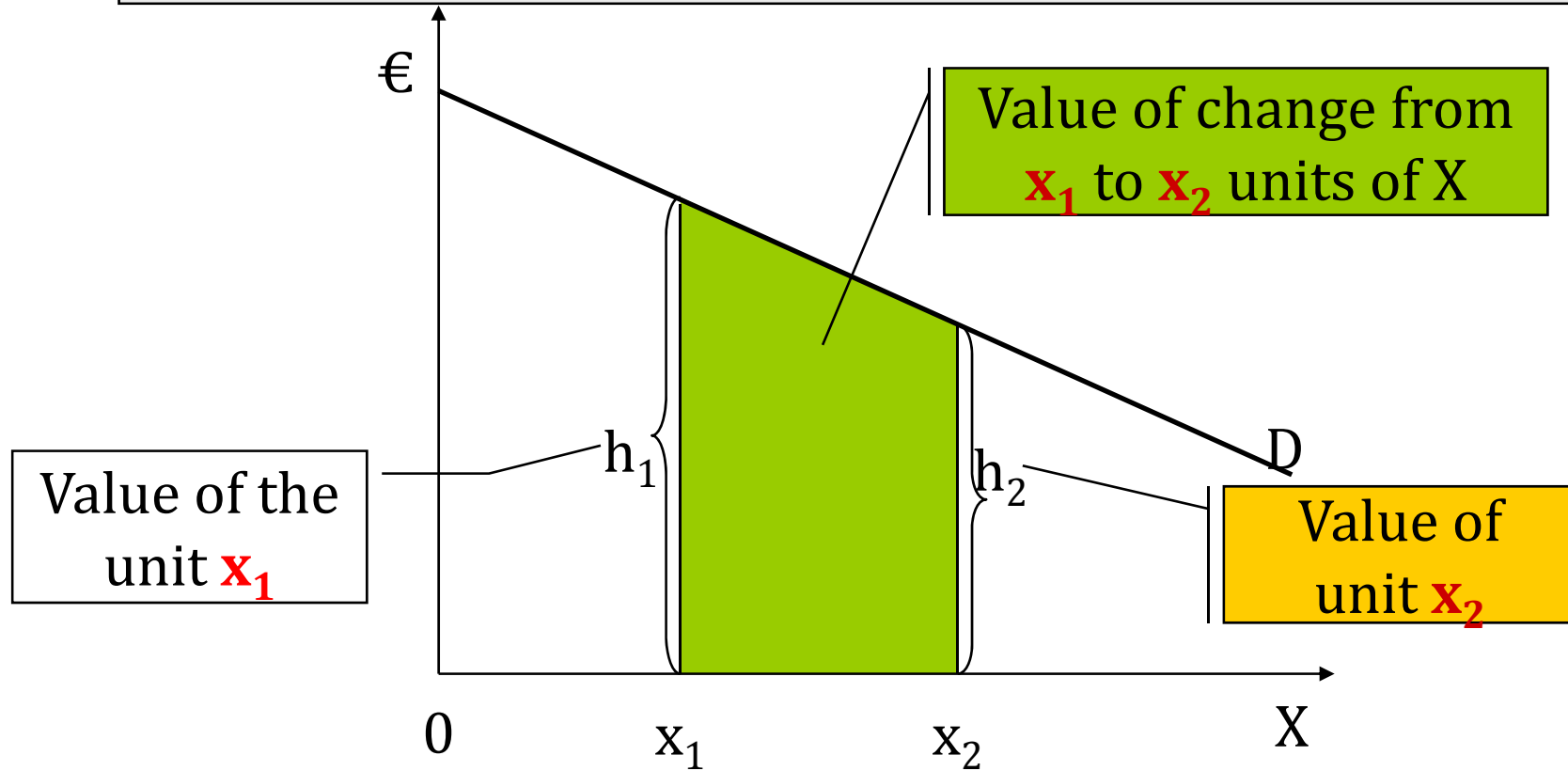
We always value changes in quantity or quality of goods and services.

The change can only be marginal. (e.g., we cannot determine the value of World's forests (Constanza 1997).



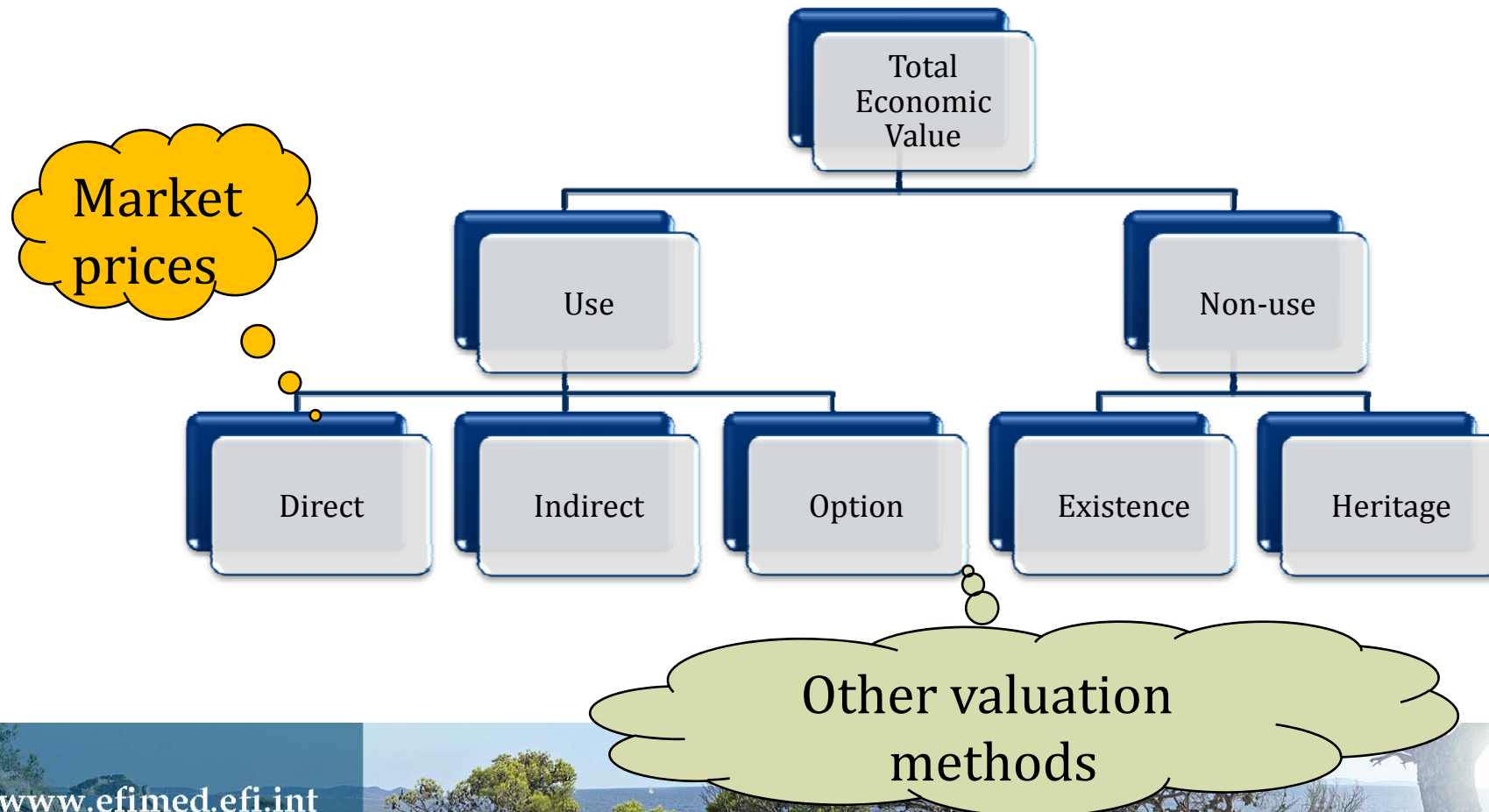


Discrete change:	X_1		X_2
Marginal change:	0		X_1



Valuation methods

- the concept of the Total Economic Value has been extensively used to quantify the full value of the different forest goods and services





Valuation methods (I)

- **Revealed preferences methods** are based on actual observed behavior data
- Deriving values:
 - directly (e.g. from market prices)
 - indirectly from behavior in surrogate markets, which are hypothesized to have a direct relationship with the ecosystem service of interest (e.g. travel cost method, hedonic pricing method)
- applicable only for some forest goods and services (e.g. market goods, recreation, aesthetics)



Valuation methods (II)

- **Stated preference methods** are based on hypothetical behavior data, the value is inferred from people's responses to questions describing hypothetical markets or situations (Contingent valuation method, Choice modeling)
 - applicable to derive economic values for all types of forest goods and services
 - disadvantage is the complexity (expert knowledge) and expensive in application



Today's schedule

Morning

- Revealed preference (indirect valuation) methods
- Stated preference (direct valuation) methods

Afternoon

- Benefit transfer
- Concluding remarks
- Practices