



EUROPEAN FOREST INSTITUTE
MEDITERRANEAN REGIONAL OFFICE - EFIMED

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Policy and economic aspects for the sustainable provision of forest goods and services

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Presentation

- Why forests are important?
- Forest goods and services
- Valuation
- Market problems
- Policies



Why do we care about forests?

- They are important
 - They are important for HUMANS
 - They provide us GOODS and SERVICES



Economic approach





Objectives of forest management

Ecological





Production, distribution and consumption

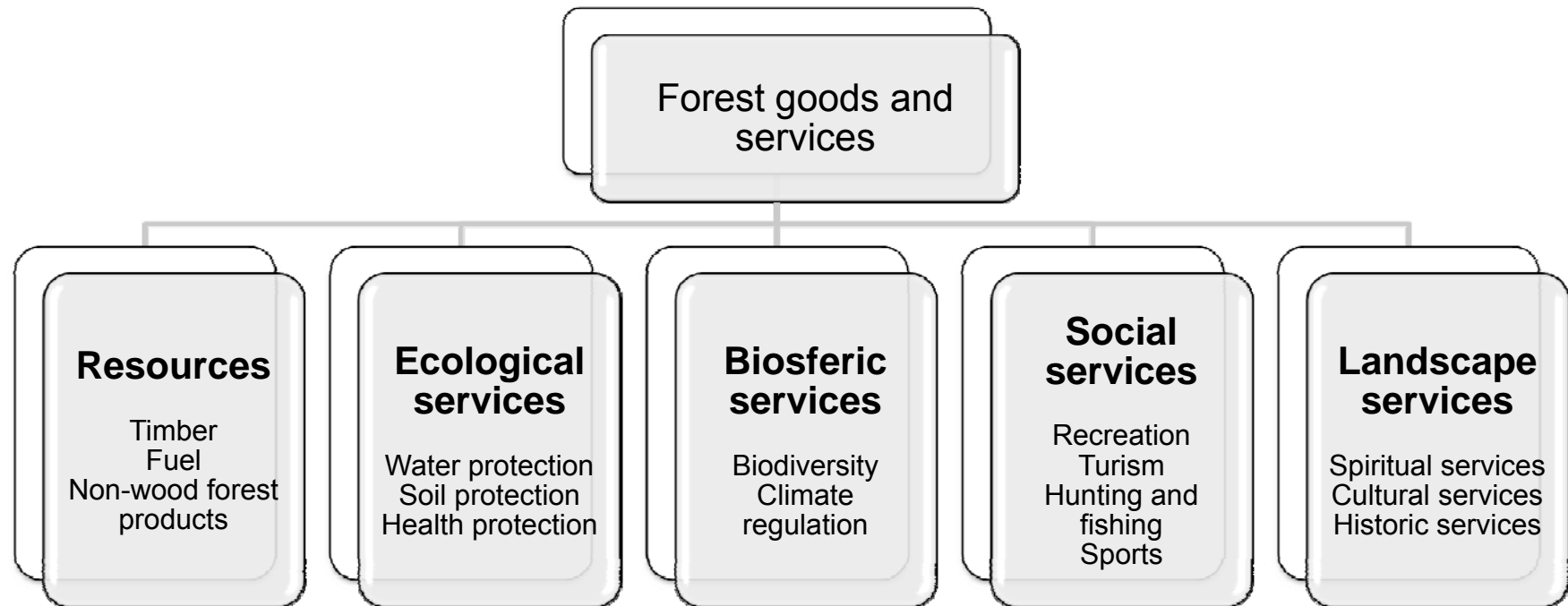
➤ Property rights and Government role





Our products to society

Classification of forest goods and services

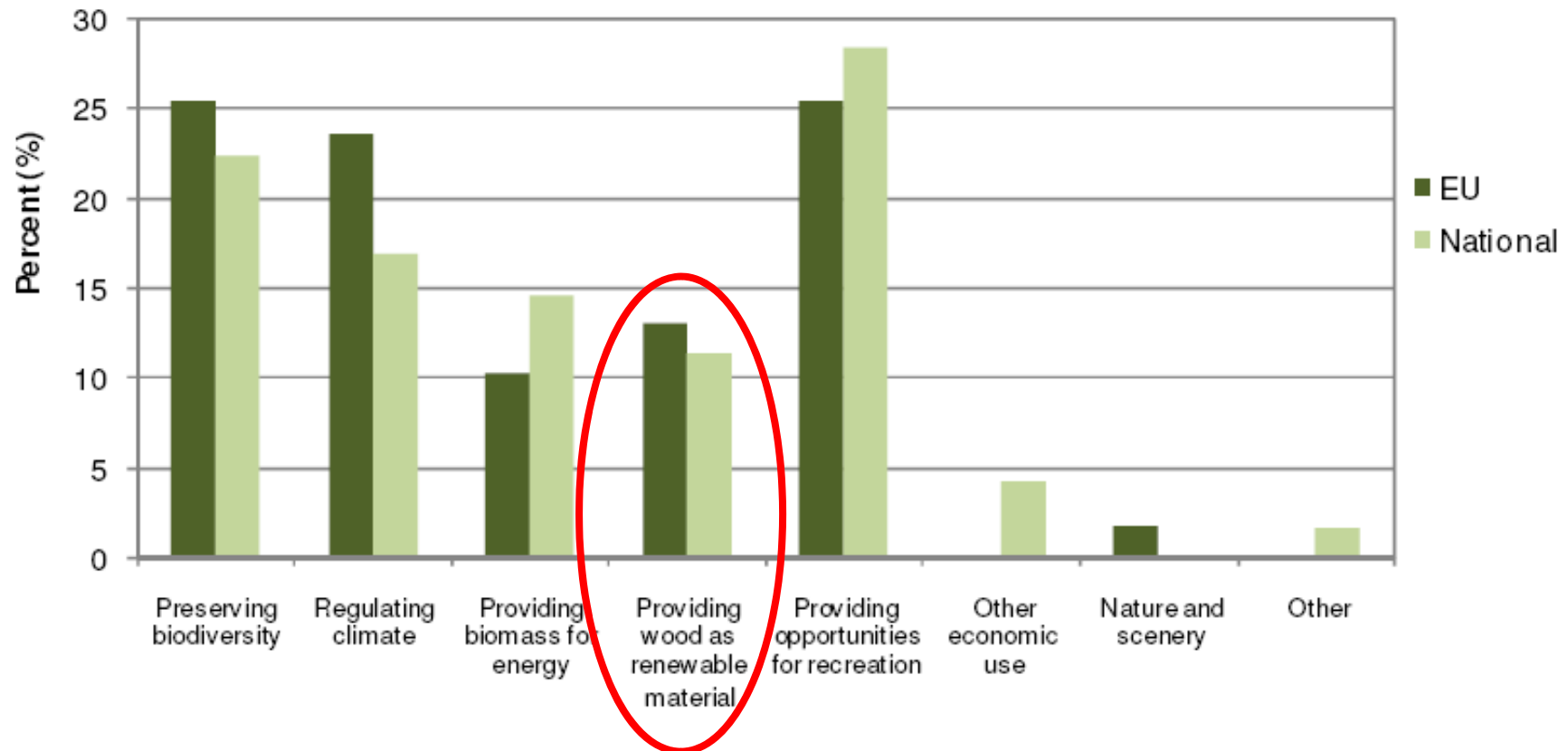


Source: MEA (2005)





Importance of forests goods and services in the EU



Source: ECORYS (2009)





¿Value = Price?

VALUE is the maximum amount a person is willing to pay for one unit of good.



1st bottle of
water

3€

2st bottle of
water

2€

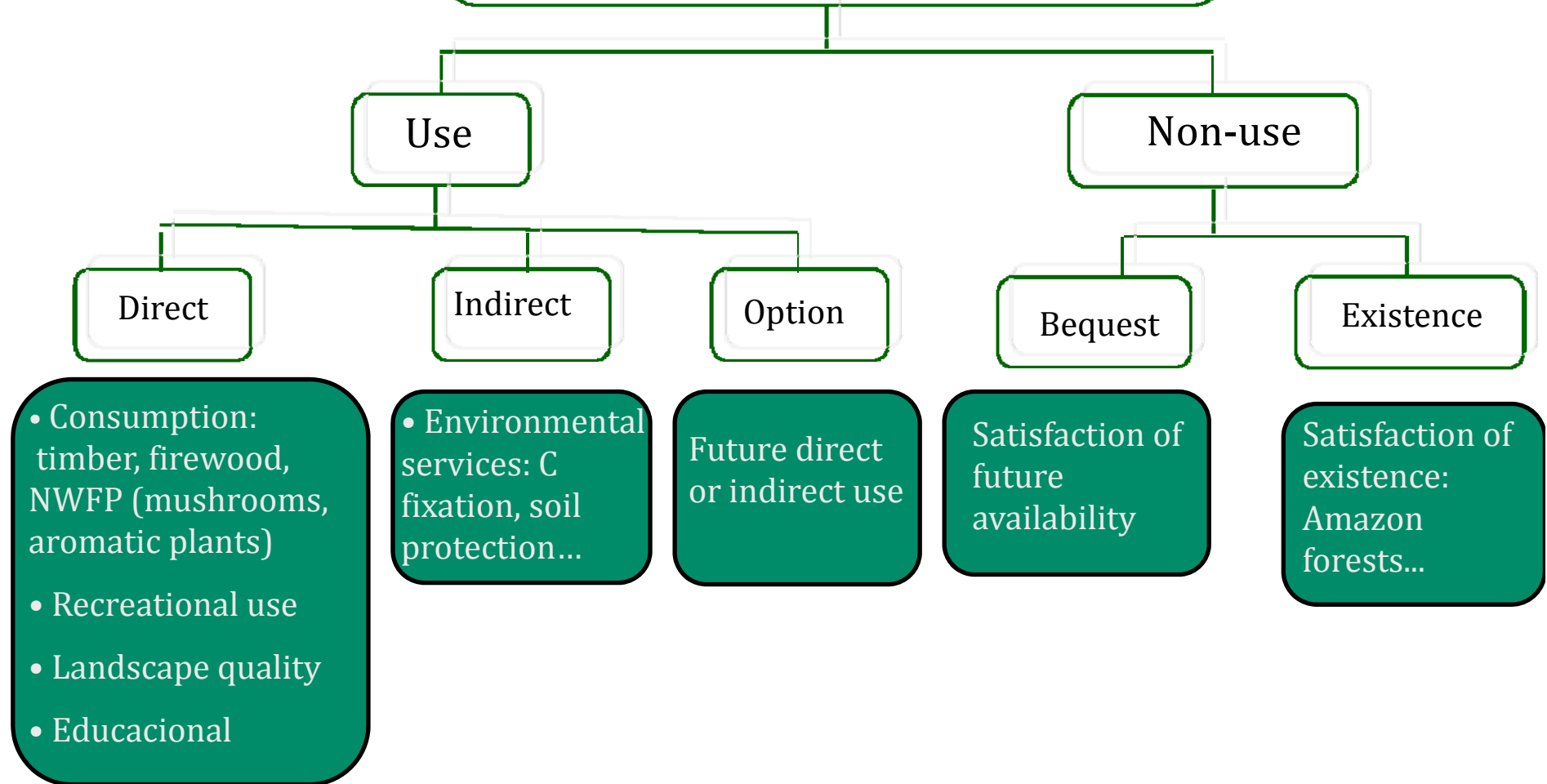
3st bottle of
water

1€



Total Economic Value

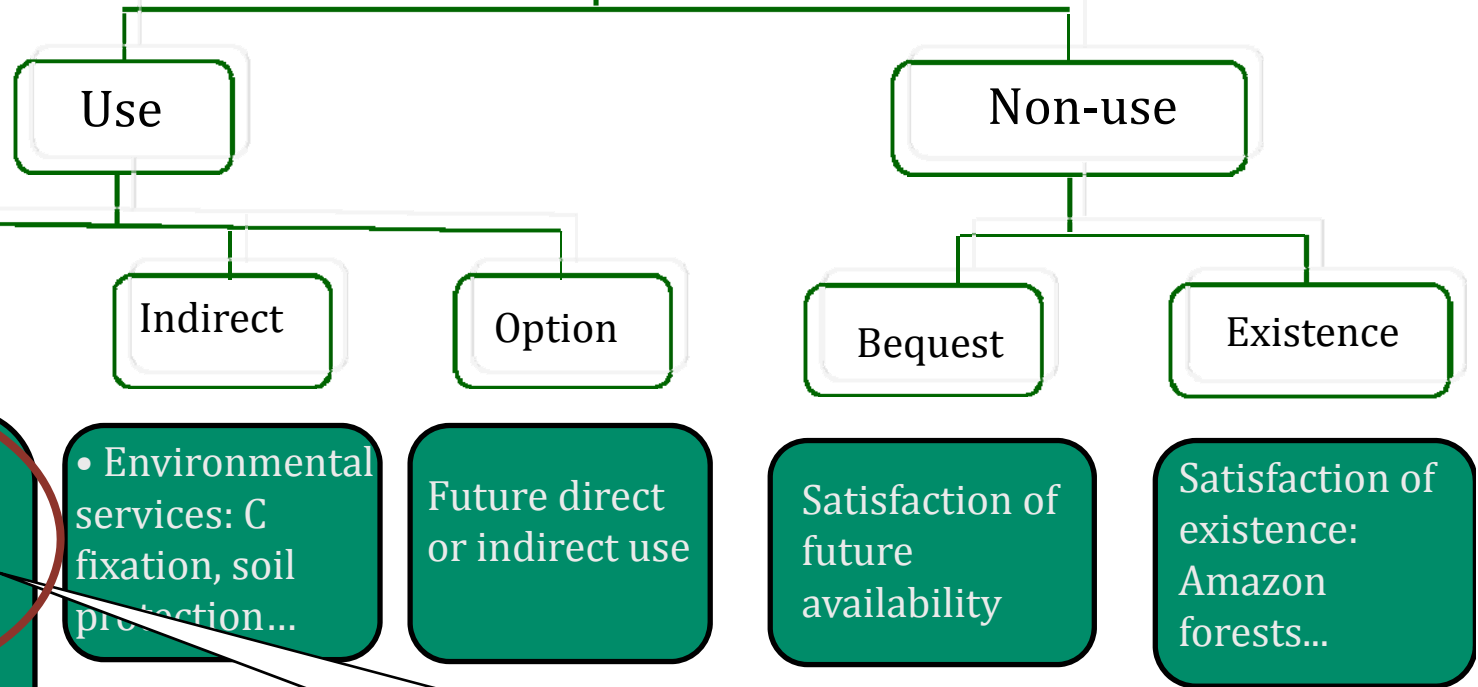
= Use value + Non-use value





Total Economic Value

= Use value + Non-use value



• Consumption: timber, firewood, NWFP (mushrooms, aromatic plants)

- Recreational use
- Landscape quality
- Educacional

• Environmental services: C fixation, soil protection...

Future direct or indirect use

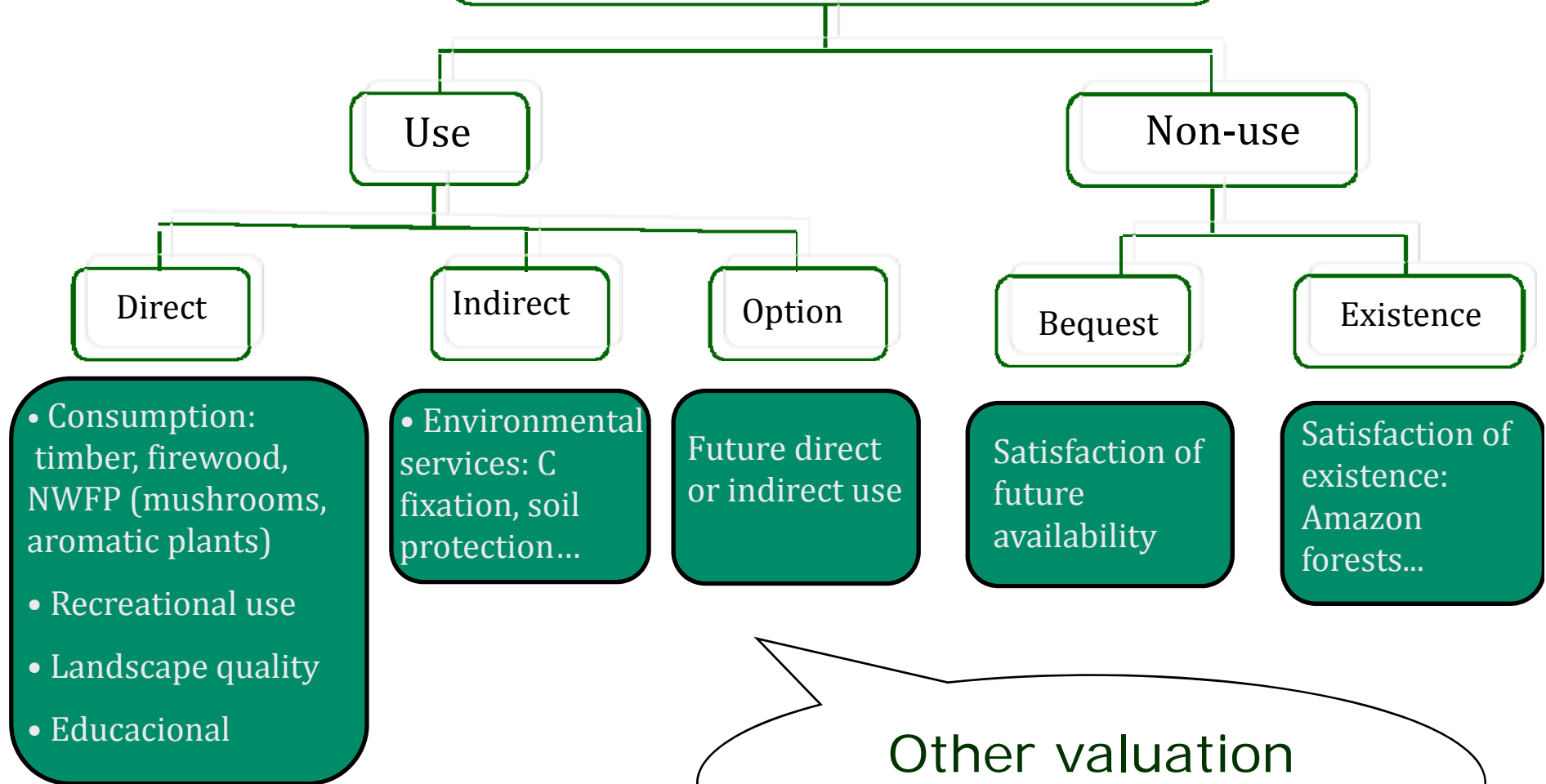
Satisfaction of future availability

Satisfaction of existence: Amazon forests...

Using market prices (if exist)



Total Economic Value
= Use value + Non-use value



Other valuation techniques



Valuation techniques

- Using market prices
- Using information about people's behaviour:
 - **Revealed preference methods**
 - Hedonic prices
 - Travel cost
 - Other cost-based methods (e.g. preventive costs)
 - **Stated preference methods**
 - Contingent valuation
 - Choice modelling





Some values of Catalan forests

Carbon

- CE – reduce equivalent to 100.000 inhabitants city
→ **4,2€/person/yr**

Shrubs

- CE – increase shrub area 1%
→ **0,9€/person/yr**

Erosion

- CE – delate soil productivity loss 1 year → **0,02€/person/yr**
- Disminish 1% eroded area
→ **2,9€/persona/año**

Recreation

- CE – picnic → **4,4€/person/yr**
- mushroom – 5,8€/person/yr
- TCM – visit → **8,4€/visit**
- visit+forest conservation – **6,5€/visit**

Wildfires

- CE - Reduce 1% burnt shrubs area
→ **12,1€/person/yr**
- Reduce 0,1% burnt forest area
→ **23,5 €/person/yr**
- Reduce 1% mortality in burnt trees
→ **2,65€/person/yr**





Current socio-economic context

DEMAND SIDE

Urbanization and rural despopulation



Low profitability of forests



Land abandonment and lack of management



Increase of living standards



More leisure time
More interest in nature



Environmental awareness



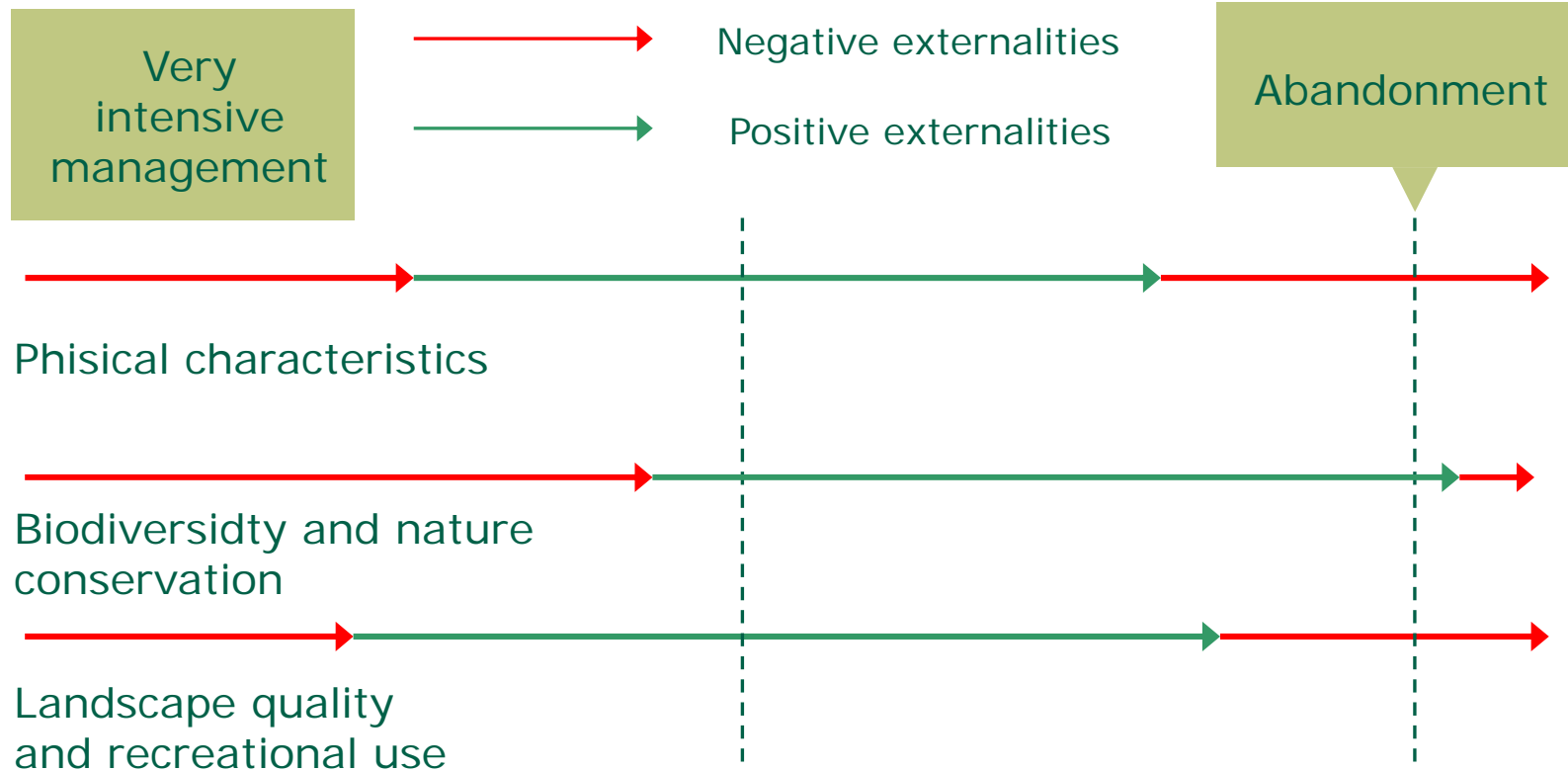
Demand of social and environmental functions





Externalities and forest management

PROVISION SIDE



NW MED

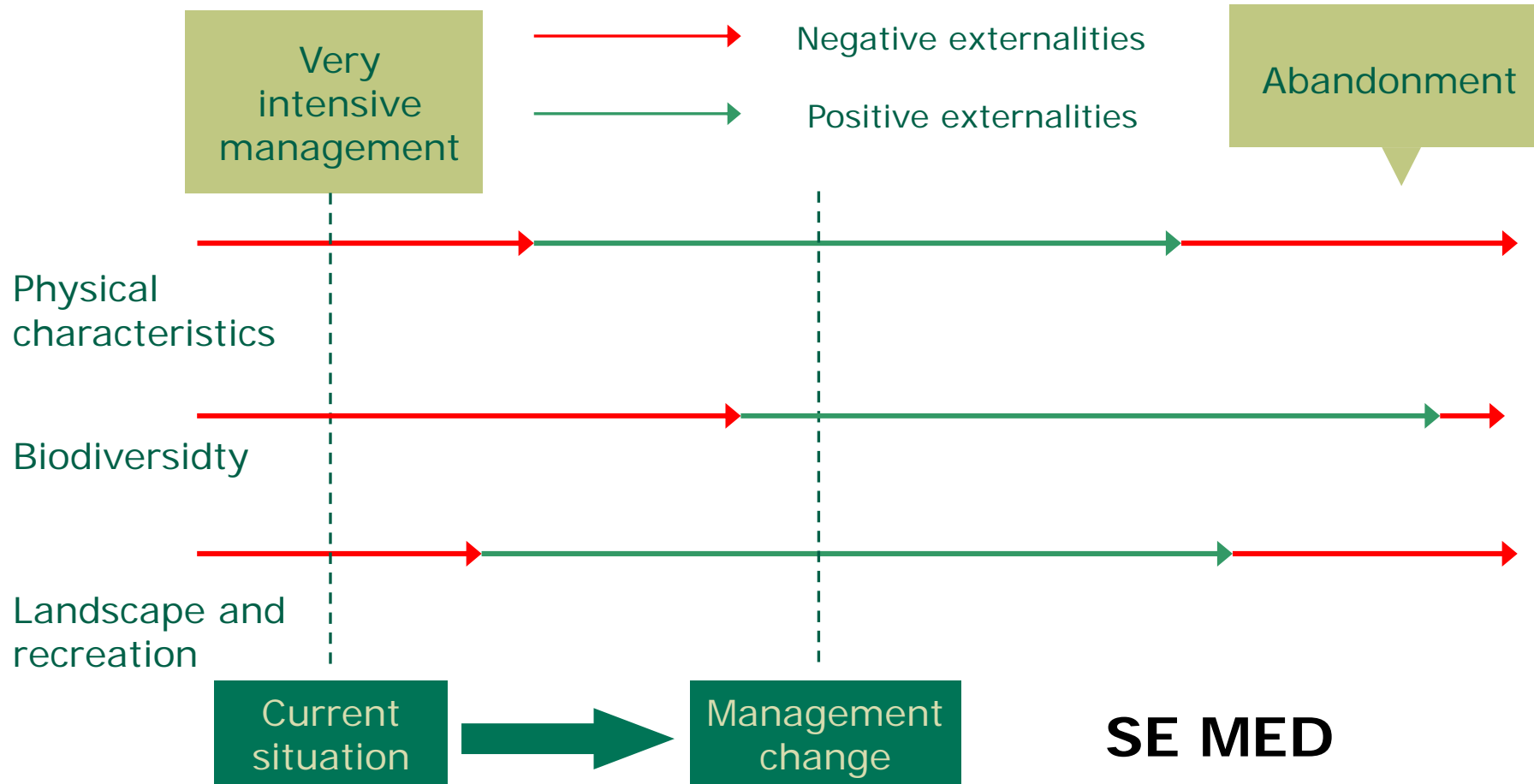


Compensations

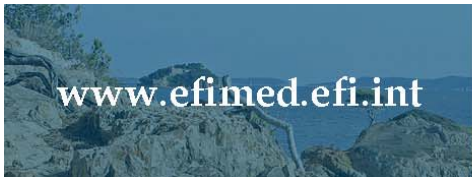




Externalities and forest management



Compensations

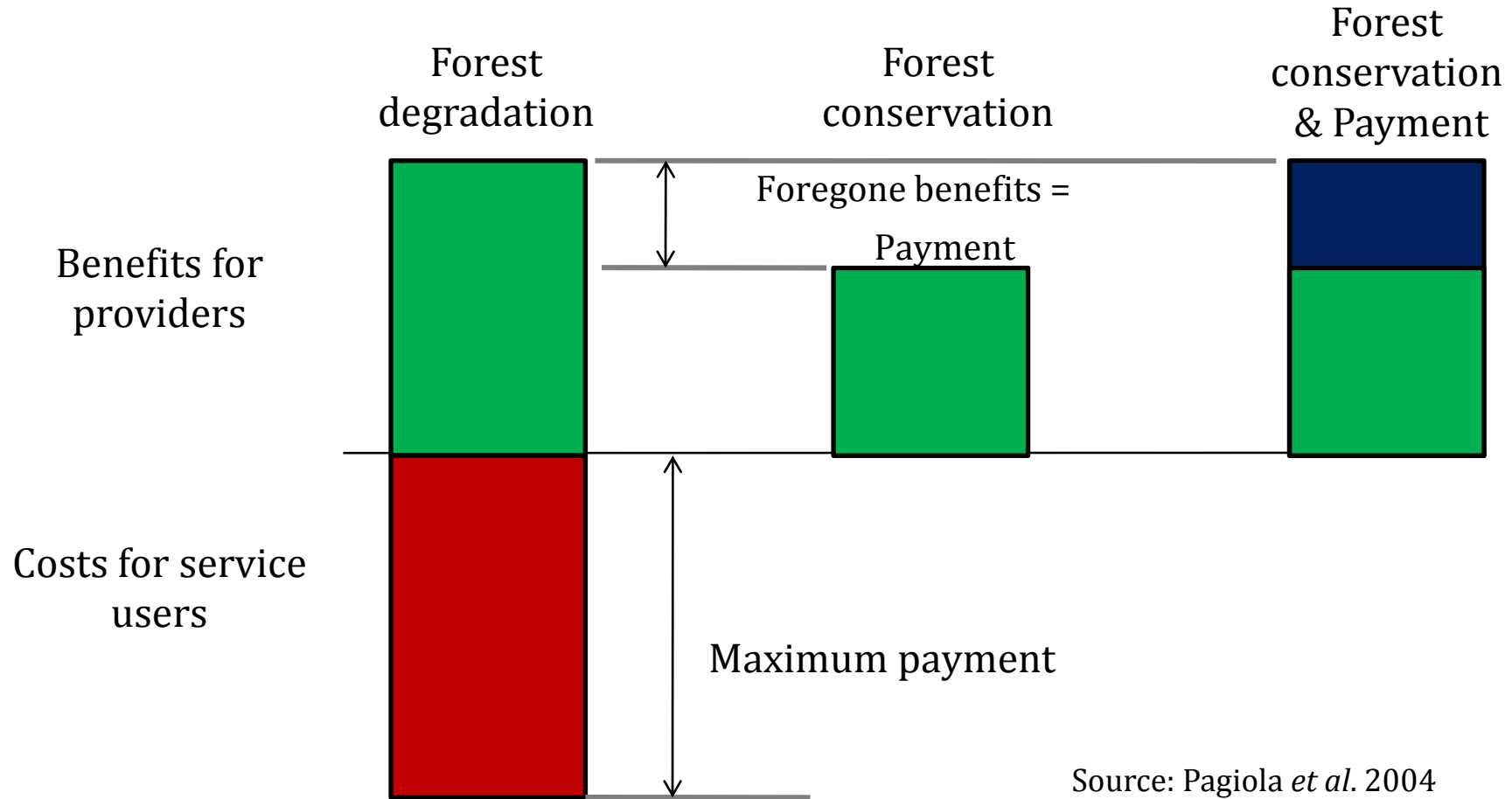


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Use of economic values of non market goods





Policy typologies

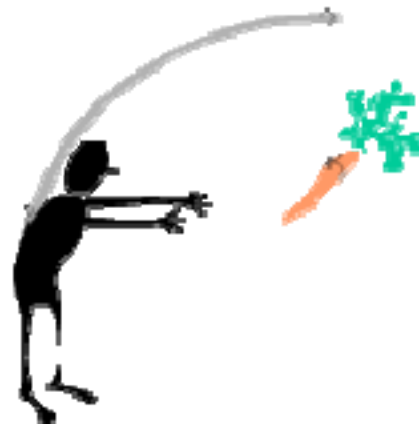
Sticks

Command-and-Control



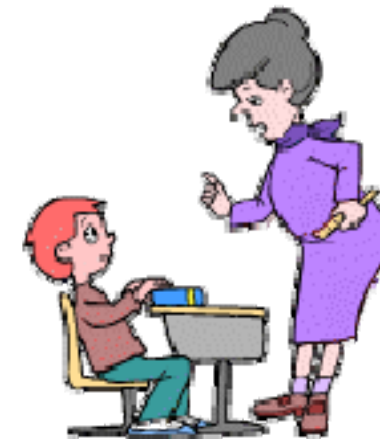
Carrots

Economic incentives



Sermons

Information





Some policy instruments

Sticks

Command-and-Control

- Prohibition /bans
- Standards
- Licenses / permits
- Government production

Carrots

Economic incentives

- Taxes / fees
- subsidies
- Deposit-refund systems
- Tradable permits
- Offset schemes
- PES ...

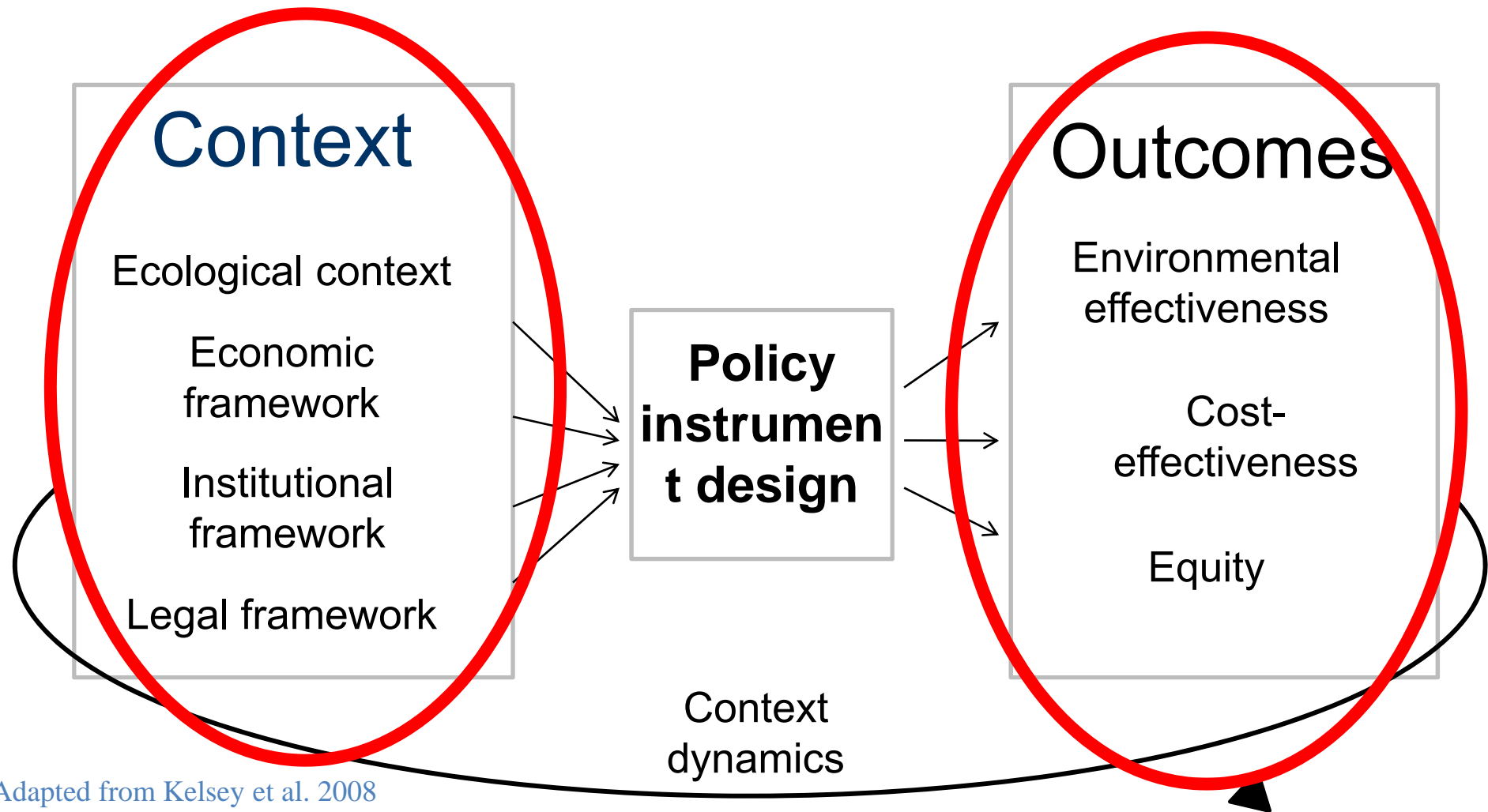
Sermons

Information

- Information disclosure:
certification
- Technical assistance
- Awareness campaigns
- R & D



Policy adequation



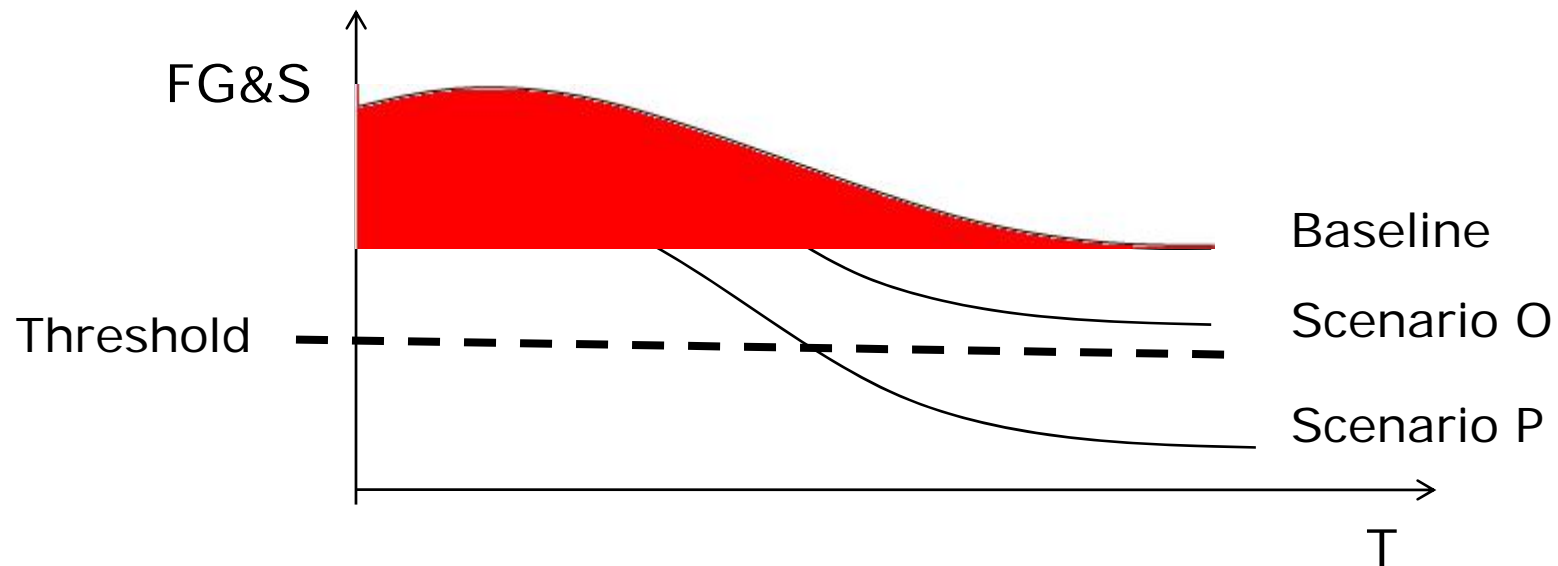
Adapted from Kelsey et al. 2008





Forests, policies and climate change

Uncertainties: effects of CC on FG&S?
Losses?





Conclusions

- Economic values as signal from social preferences
- Economic values as meaningful references (ranges)
- Economic values as a tool of awareness
- Necessary explanatory indicators for policy making
- Necessary bioeconomic models
- Deepen in experimental economics: uncertainties, role of money
- Deepen in the context analysis for policy design



Thank you!

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Merci Grazie
Gracias Hvala
Obrigado

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