



***Provision of public goods  
through agriculture: a new  
rationale for CAP and  
rural development policy?***

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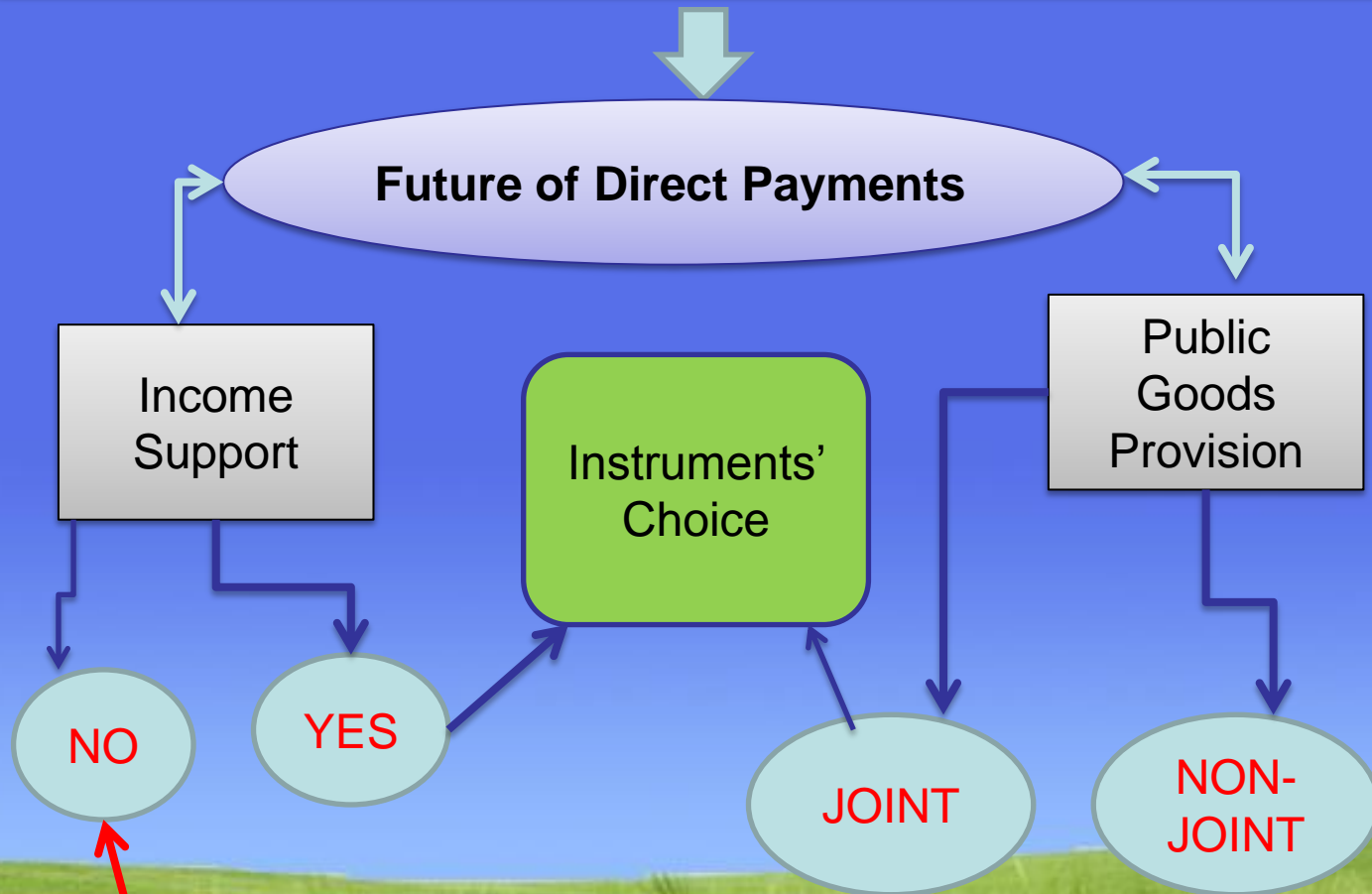
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# ***Structure of Presentation***

- 1) What is the relevance of the public goods debate with *rural development policy* ?
- 2) What is and what is not Public Good?
- 3) Why do we care about Public Goods?
- 4) The issue of Externalities
- 5) Which rationale applies?
- 6) The issue of Jointness
- 7) Jointness & Reference Point
- 8) Issues to be resolved
- 9) Some examples & opportunities

# What is the relevance of the public goods debate with *rural development policy* ?



D. Harvey

I. Hodge (CATRS)  
D. Coleman

# *Classification of Goods: Basic Terms and Definitions*

## Two Criteria for Classifying Goods



1. indivisibility of benefits
2. excludability of benefits

PRIVATE

fully rival  
&  
complete  
excludable

PUBLIC

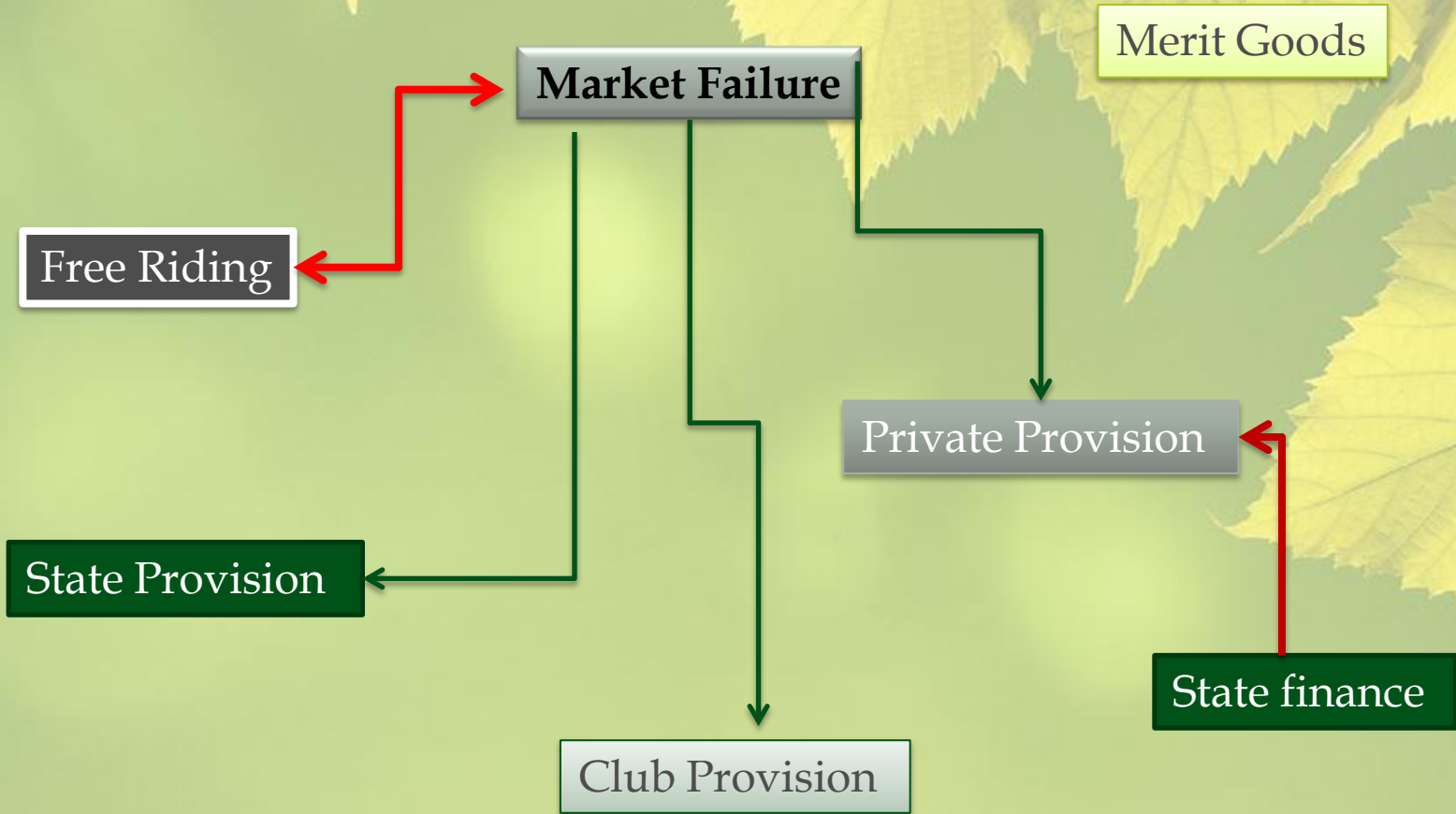
non rival  
&  
non-  
excludable



# Typology of Goods



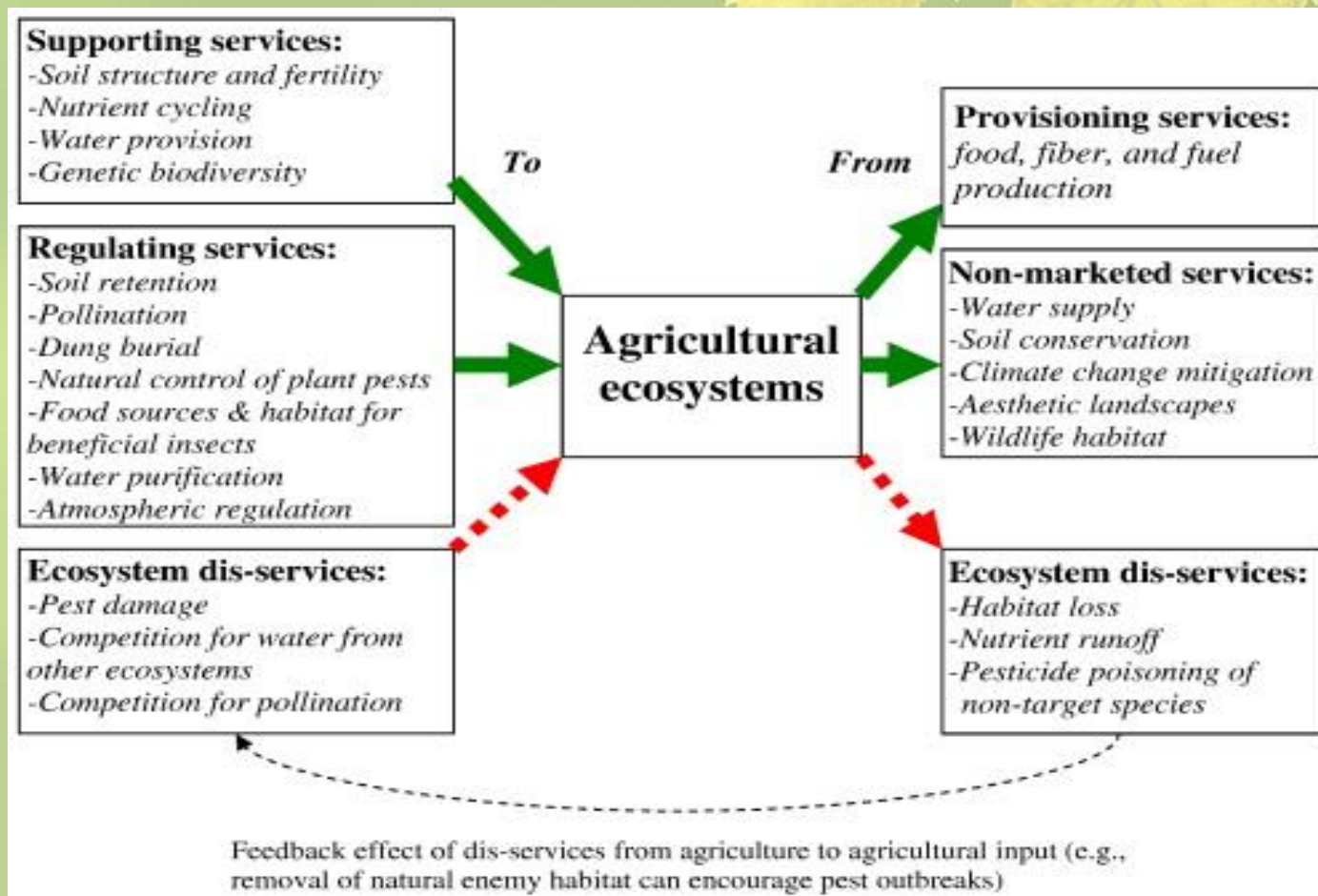
# Why do we care for Public Goods ?



# Which are the Agricultural Public Goods?

D. Bromley, 2000: Rural Amenities,  
Environmental services, Biodiversity and Provision of habitats

Source: Zhang et al, 2007



# Provision of Public Goods through Agriculture in the European Union by Cooper, Hart and Baldock (2009)

1	Agricultural landscapes
2	Farmland biodiversity
3	Water quality
4	Water availability
5	Soil functionality
6	Climate stability – carbon storage
7	Climate stability – greenhouse gas emissions
8	Air quality
9	Resilience to flooding
10	Resilience to fire





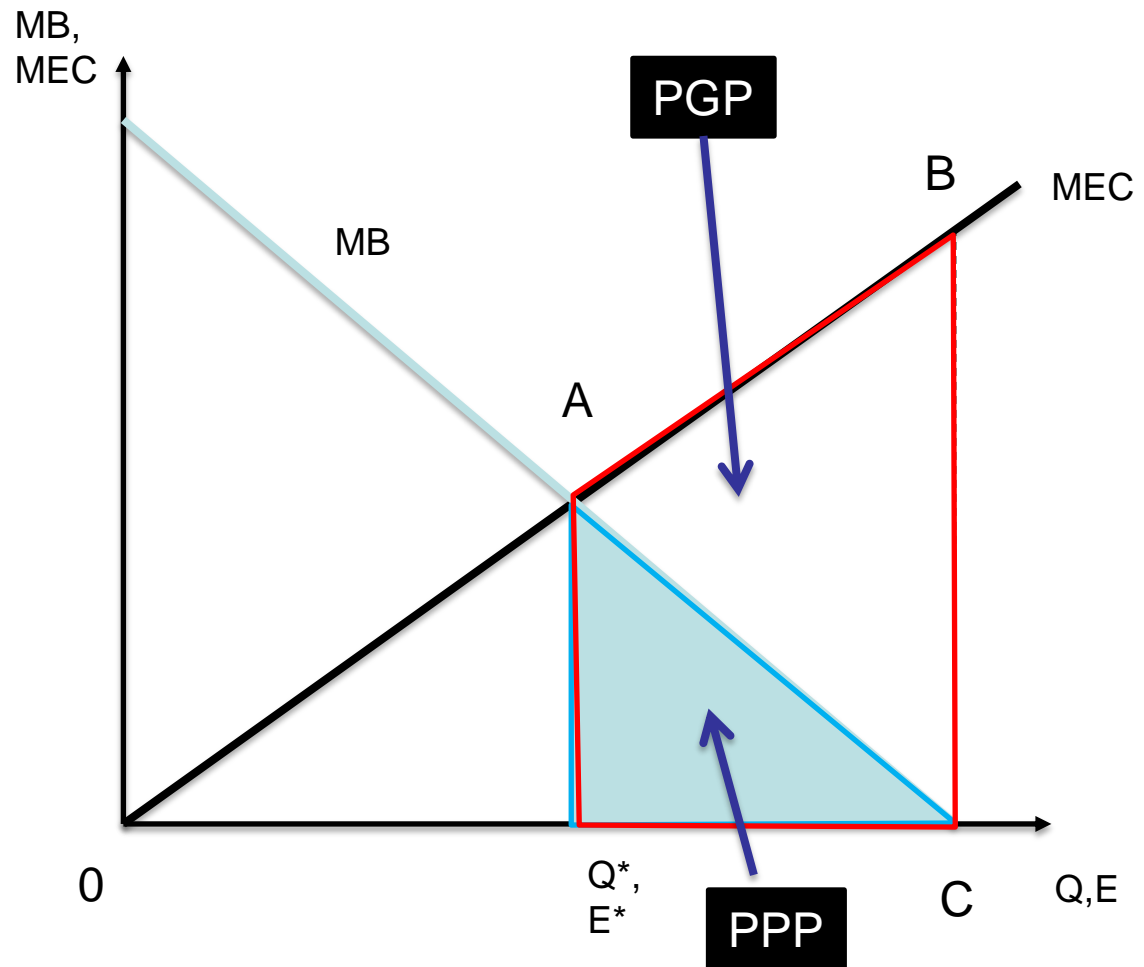
# The Idiosyncratic Nature of Public goods

the key elements of public goods provided by agriculture are:

- a) some of them exhibit the characteristics of **externalities**.
- b) market and non-market goods are **jointly produced**.

## externalities

Reducing a public “bad” equals Providing a Public “good”



Nutrient Pollution as typical negative externality

# What is a legitimate rationale ?

## Polluter Pays Principle (PPP)

- **One of the fundamental principles of EU Environmental Policy**
- Treaty on the Functioning of the European Union,
- **Part Three:** Policies and Internal Actions of the Union,
- **Title XIX:** Environment, Article 191 (2008)

## Provider Gets Principle (PGP)

- Hanley et al (1998)

Beneficiaries  
Pays Principle  
(BPP)

# Agri-environmental Payments



**Opportunity (income) Forgone:** Article 39 regulation 1698/2005 (on support for rural development by the European Agricultural Fund for Rural Development)



How can be justified?

Property rights: Who has the right to do what?? (we can go forever)

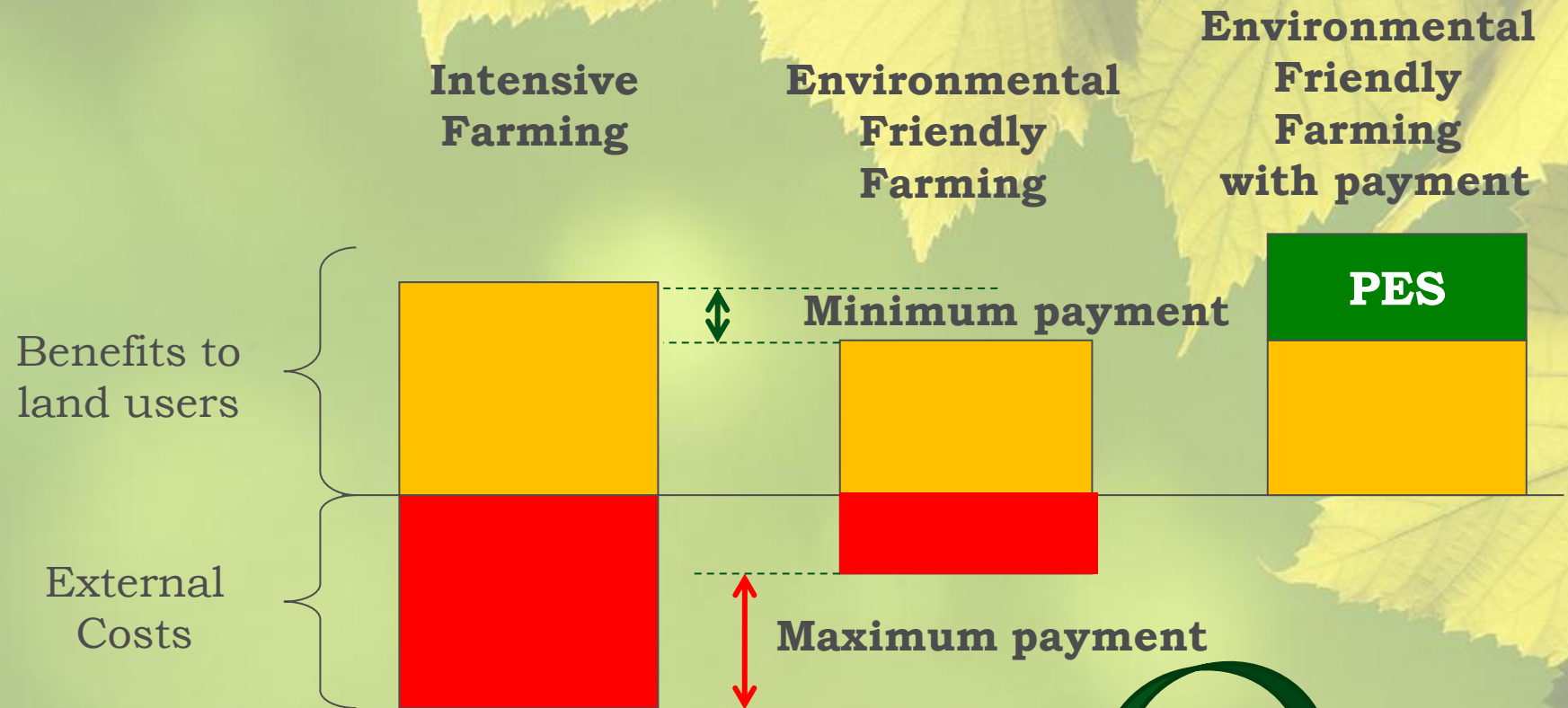
or

Variation of Coasian Argument ???

or

Kaldor Hicks Compensation ????

# Payments for Environmental Services (PES)



Rationale:  
Provider  
Gets  
Principle

$$\max \geq PES \geq \min$$

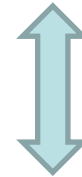
Rationale:  
Income  
forgone

(adopted after Pagiola & Platais, 2005)

# JOINTNESS

technical interdependencies

Non-allocable input



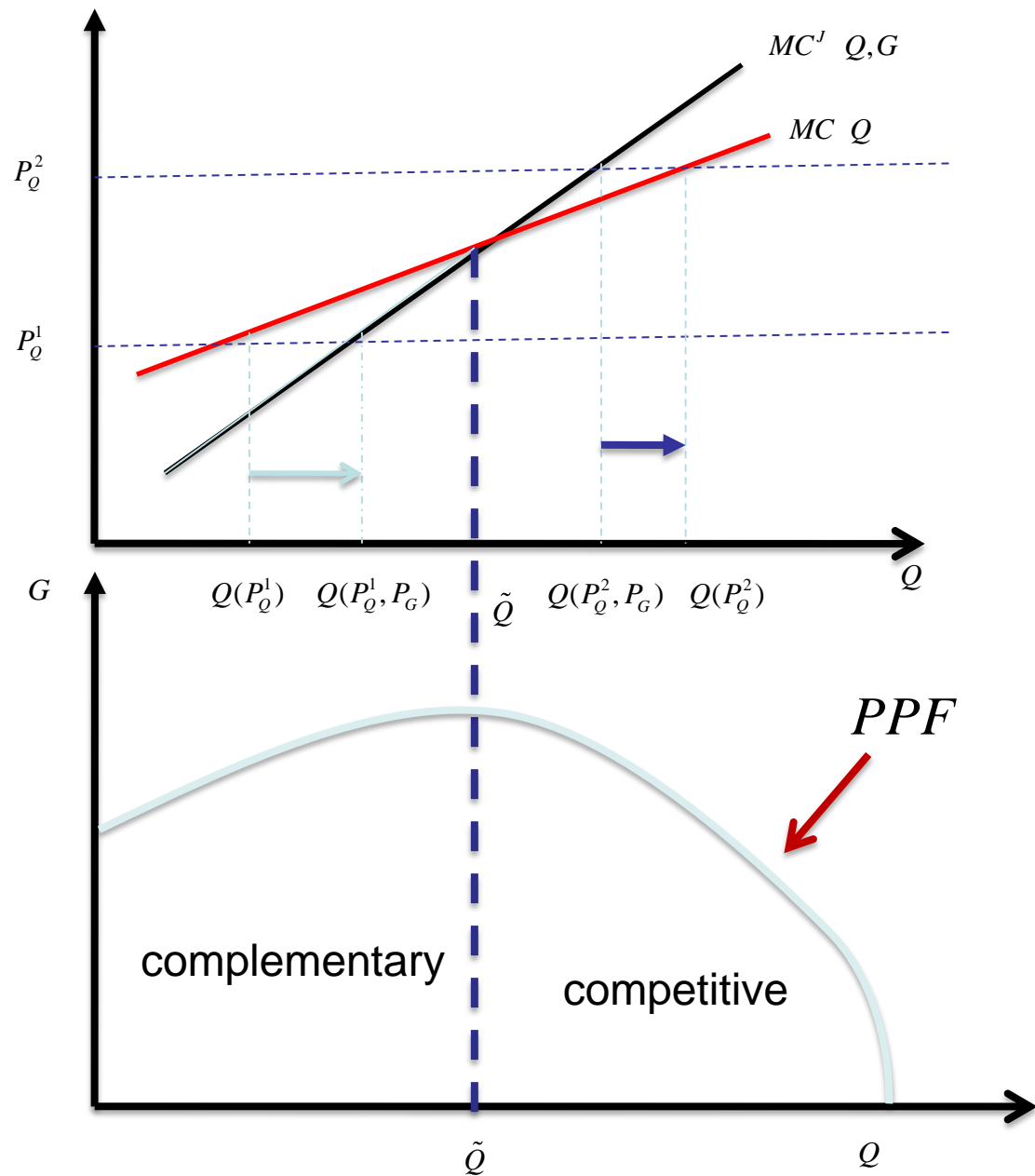
$$\sum_i C Y_i > C \left( \sum_i Y_i \right)$$

Economies of scope

$$C Q + C G > C Q, G$$

Q: Livestock output

G: Biodiversity (in terms of species richness)



# JOINTNESS & REFERENCE POINT

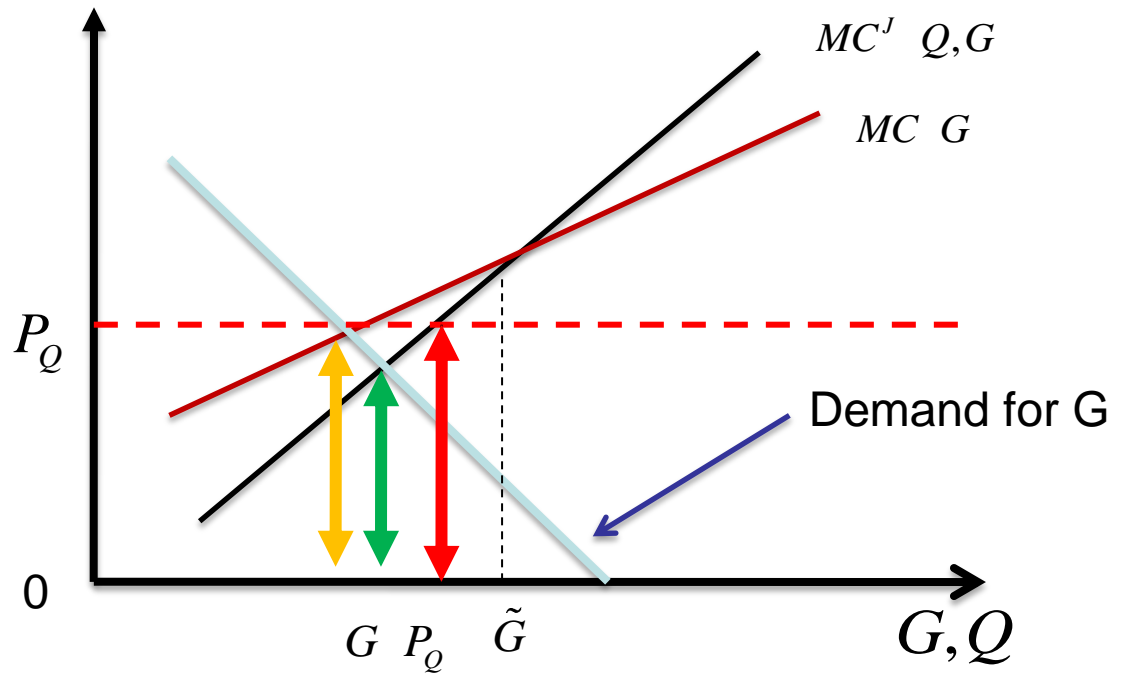
How to assess the **reference point** in the case of joint production of market and non-market goods?

Level of Environmental Performance which farmers should comply with **at their own cost** (Buckwell A., 2009)

The crucial issue is society's demand for non-market goods

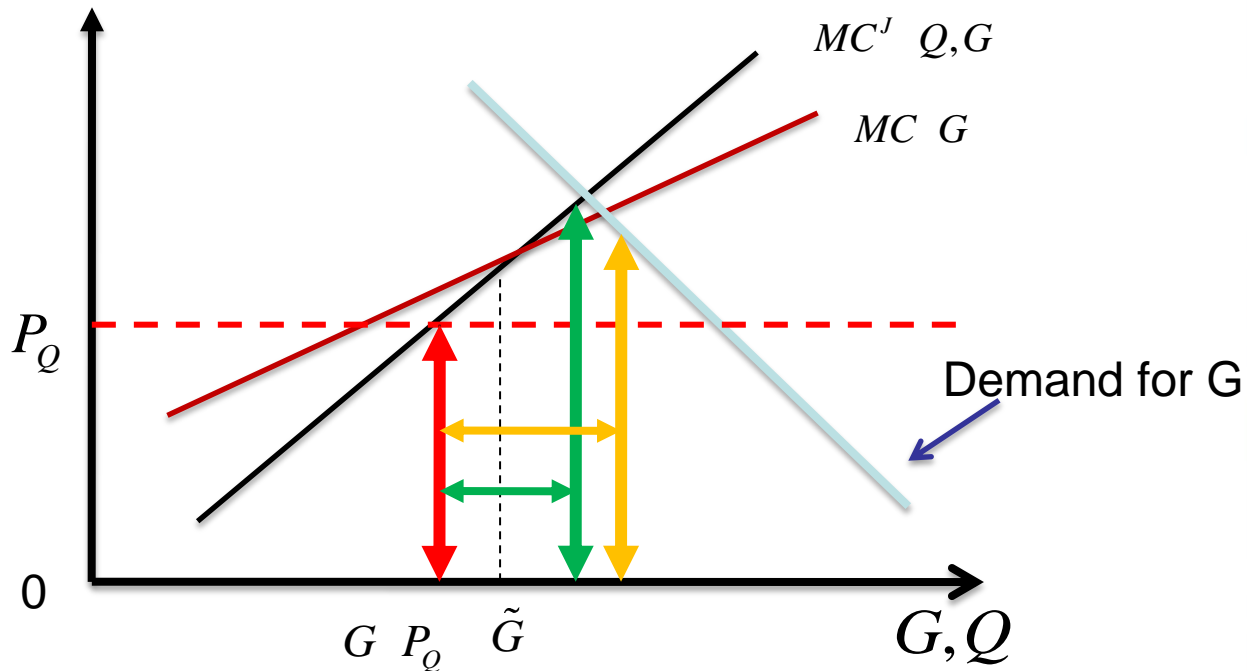


# Jointness & Low Demand for G



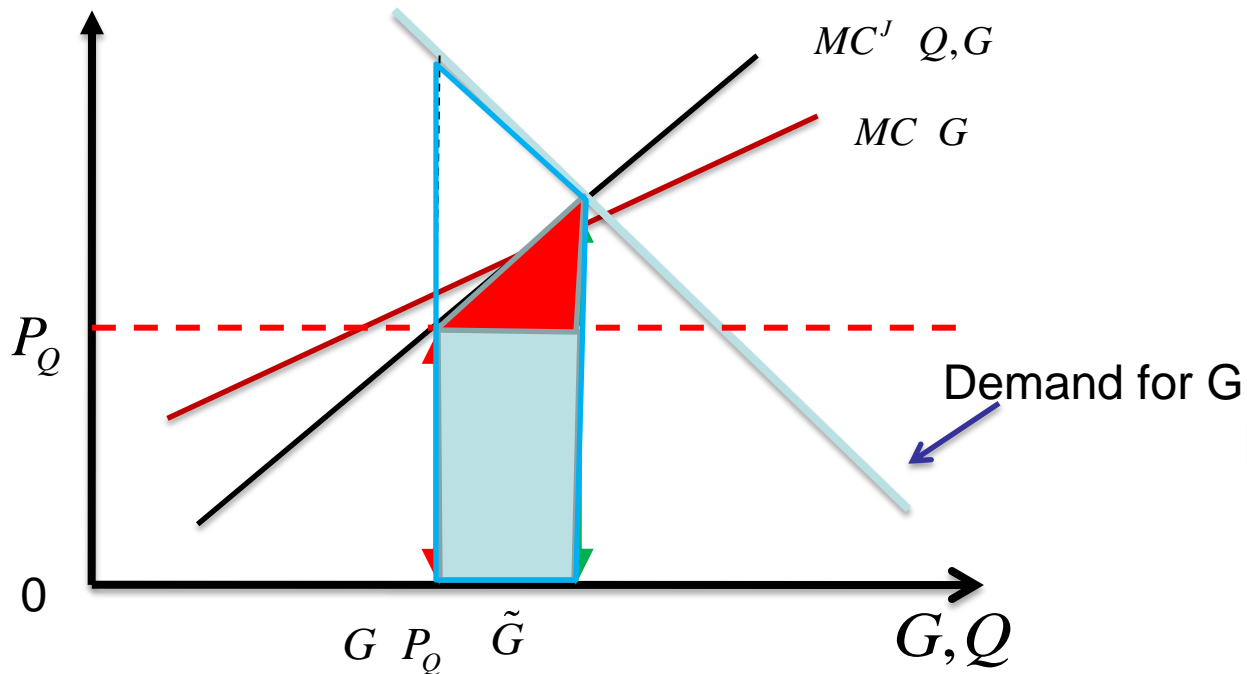
**No** case for environmental payments  
**Over-supply** of Public Goods

# Jointness & High Demand for G



Case for environmental payments  
**Under-supply** of Public Goods

# Jointness & High Demand for G



$PES \geq$  

Incentive compatible payment for environmental service

# Issues to be resolved

## Practical

- 1) Additionality ???
- 2) Reference Point

## Theoretical

- 1) Justifying principle
- 2) Multiple Policy Objective (Tinbergen Rule)

## Appropriate Mix of Policy Instruments

WFD :  
Polluter Pays Principle

Public Good Provision :  
Provider Gets Principle ???

# Services provided by extensive olive groves

- Production of high quality product
- Erosion control (terraces)
- Landscape (walls and terraces)
- Cultural goods and service
- Biodiversity
- Fire control
- Flood control
- Water quality and quantity
- High nature value farming areas**

# Peri-urban agro-ecosystem services

- Production
  - **Food, Fiber, Energy**
- Environment
  - **Erosion control (terraces)**
  - **Landscape (walls and terraces)**
  - **Biodiversity**
  - **Fire control**
  - **Flood control**
  - **Water quality and quantity**
  - **Low carbon production of goods and services**
  - **Carbon storage**
  - **Microclimate regulation**
- «Urban»
  - **Open space**
  - **Amenity**
  - **Quiet areas**
  - **Quality residence**
- Cultural goods and service

# Opportunity for Greek policy makers

- Approximately 70% of the Greek UAA (cultivated + grazing) low intensity farming systems IEEP, 1994.
- Potential High Nature Value areas. More recent estimations 59%. Paracchini *et al*, ( 2008)
- Reorientation of policy measures 1<sup>st</sup> and 2<sup>nd</sup> Pillar.