- Conditions for a Coasian solution; property rights are clearly defined and enforced and transaction costs are low (Coase, 1960). If these are not fulfilled, govt financed = only option
  - As number of ES buyers increases, so do transaction costs and incentives to free ride —> govt can overcome this by charging compulsory user fees
  - When ES are public goods difficult to identify and delimit users

## - Who are the sellers

- Actors in a position to safeguard delivery of ES
- How do PES mechanisms work
  - Programmes designed for CHANGING land use rather than preserving current land use = much higher cost
  - Nature of land use will affect economy especially in terms of labour demand
  - Must be able to verify existence of ES and establish a baseline so additional units 'provided' can be measured
    - Need to understand processes and patterns
  - Ideally payments would be output based e.g. for carbon sequestration but mangers often cannot observe this so payments based on adoption of particular land uses/input based. (per hectare)
  - Payment offered > additional benefit from alternative land use

## PES vs. other policy instruments

## Environmental taxes

- PES acts as an environmental subsidy; seen as second best to taxes due to inefficiencies.
  - Lack of additionally paying for services which would be conducted anyway
  - Leakage shifting damaging services to other areas (PHH)
  - Perverse incentives increasing destruction for higher subsidies later on
  - Subsidised activities = more profitable so may be expanded at the expense of other envicement of the second second
- BUT taxes impose costs on land users not service users, we veloped countries, powerful agricultural producers shift policies —> sublide flot taxes
- Equity preference in developing countries; land users werse off than service users (generally)
- Command and control
  - E.g. restrictions on most st and land use
  - PES more Nicion D29
  - Command and control = same level of activity to all users. PES etc. = more flexible.
    e.g. saying forests should be conserved would apply to all forests regardless of value. PES would seek to conserve forests of higher value at a lower cost. More cost efficient
  - Developing countries CandC hampered by weak governance, high transaction costs and information problems
  - Distributional consequences; e.g. poor communities rely on forests for livelihoods so restricting their use of forest resources may induce conflict/econ hardship (Bulte and Engel, 2006)
  - PES can operate where CandC already exists
- Integrated conservation and development projects
  - ICDP; provides alternatives to env damaging activities e.g. tourism, value added and product processing
  - Empirically success rates = low
  - New income sources may be used as complements rather than substitutes, so would maintain or even increase pressure on resources
  - No conditionality incentives for conservation are provided upfront
- Part of a policy mix

Effectiveness and efficiency of PES

Maps land uses according to net prive profitability.

X axis = land user perspective

Y axis = net value of ES generate to others